# Accessories

We are convinced accessories are auxiliary tools. Their development follows from practical situations in which challenges and problems present themselves; problems which could have been prevented by properly estimating the diversity and complexity of the work.

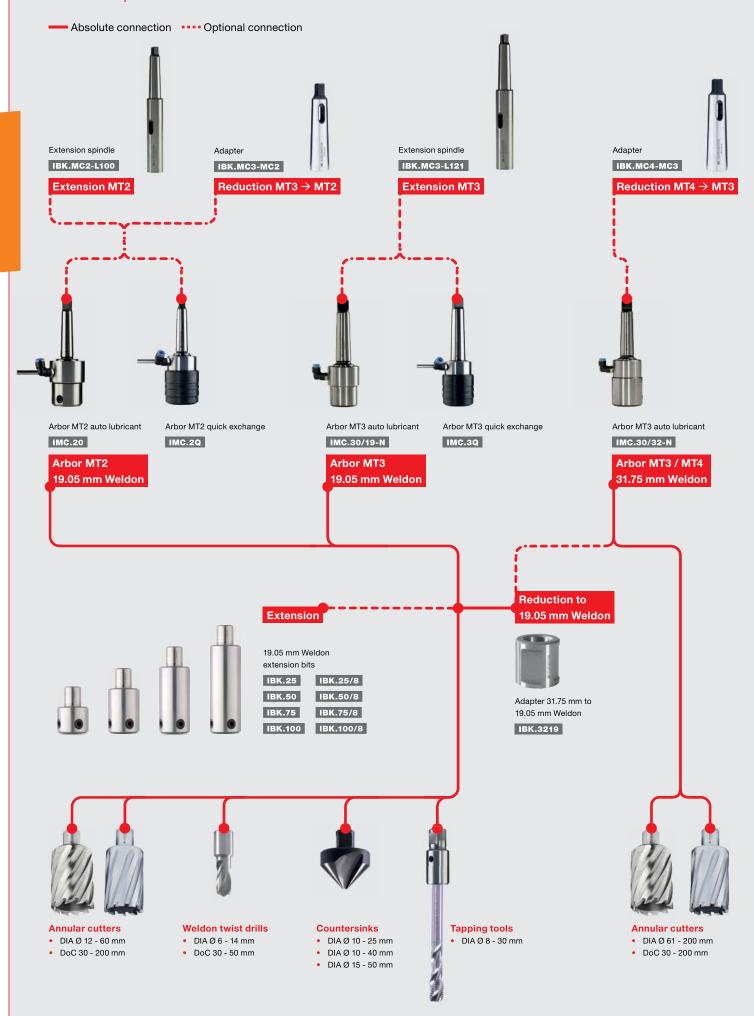
After more than 40 years of practical experience we dare to say we are familiar with most challenges that you may encounter. Euroboor accessories have been developed for direct practical solutions and comfort at work. Non-magnetic base, horizontal drilling or lack of space, you can proceed undisrupted at all times.

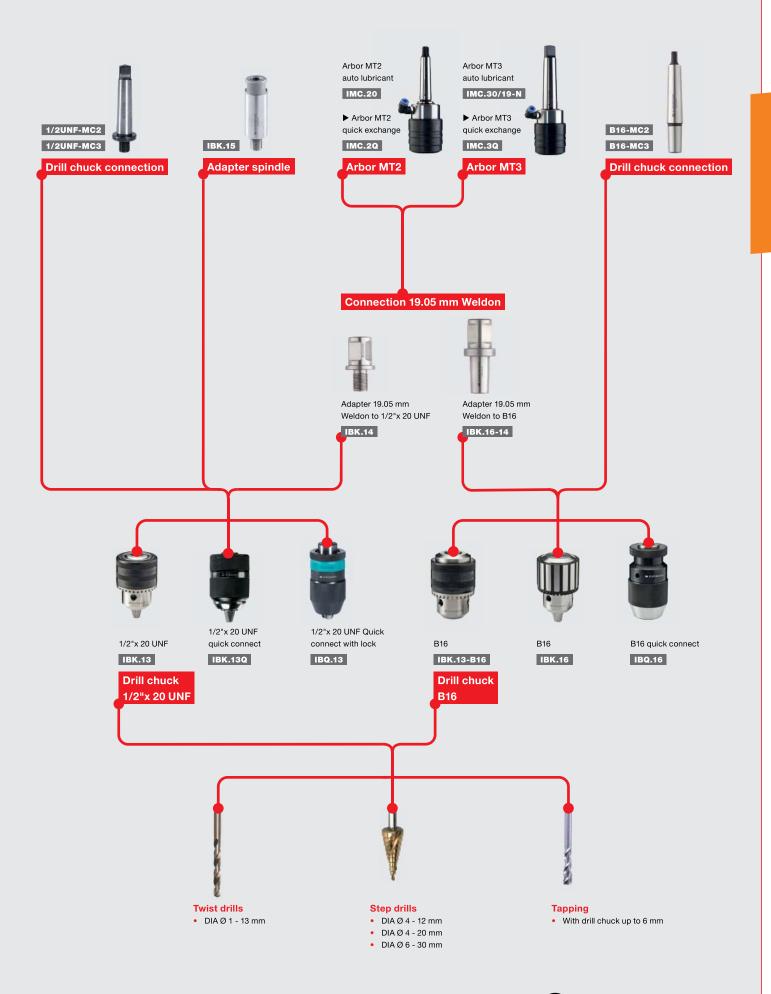
Our accessories are professional solutions that are specifically designed for and tuned to your activities.

# Practical solutions for comfort at work

"Our vision is focused on developing accessories that add value and facilitate you in your daily work".

# Weldon setup overview





www.euroboor.com



# mature kit

The armature kit consists of original parts for the maintenance of your magnetic core drill. We therefore recommend that you only use this official Euroboor kit to maintain your machine warranty. There is a suitable armature kit for all Euroboor magnetic core drilling machines.



#### Total package

The use of all spare parts from this total package ensures that the lifespan of your magnetic drilling machine can be extended by factor four to five. In addition, hidden maintenance costs are kept to a bare minimum and you maintain your machine warranty. After maintenance with the armature kit, the magnetic drilling machine operates as new again.

The armature kit with original Euroboor spare parts consists of:

- Armature
- Bearing(s)\*Circlip
- First gear
- First gear
- Carbon brush set

## ARM.KIT

 $^{\star}$  Depending on machine the number and type of bearings may vary.



# **Adapters**

# Pipe Adapter kit

- Suitable for tube diameter from Ø 50 mm up to 500 mm
- Suitable for all Euroboor magnetic drilling machines (except ECO.200 & TUBE serie)
- Suitable for almost all drilling machines in the market (for universal use)

# Dimensions PAK.250

Lenght: 286 mm Width: 268 mm Height: 96 mm

#### Dimensions inside plate

Lenght: 265 mm Width: 112 mm Height: 14 mm

# Weight

12.5 kg PAK.250





# Vacuum Adapter kit Ø 300 mm

including pump

• Dimensions: Ø 300 mm

VAC.810

# Vacuum Adapter kit oval

Clamp system with 2 suction pads including pump

• Dimensions: 450 x 250 mm

VAC.820

# Components also available separetely

# Vacuum pump

- Power: 1/2 hp
- Inlet port: 1/4" flare & 3/8" flare
- Ultimate vacuum: 3x10<sup>-1</sup> Pa, 25 microns
- Flow rate: 5 CFM, 142 I/min (110V)
  - 4.5 CFM, 128 I/min (220V)
- Voltage: 110 120 V / 220 240 V / 50 60 Hz

VAC.001



Vacuum plate oval Ø 450 x 250 mm

VAC.003

# Extensions



#### Extension Weldon 25 mm

19.05 mm (3/4") Weldon, 25 mm (1") extension, outer Ø 35 mm (1 3/8") For 6.35 mm (1/4") pilot pins

#### IBK.25

For 8 mm (5/16") pilot pins

IBK.25/8



# Extension Weldon 75 mm

19.05 mm (3/4") Weldon, 75 mm (2 15/16") extension, outer Ø 35 mm (1 3/8") For 6.35 mm (1/4") pilot pins

# IBK.75

For 8 mm (5/16") pilot pins

IBK.75/8

MT2 - 100 mm

IBK.MC2-L100

MT3 - 250 mm

IBK.MC3-L250

extension

MT3 - MT3

extension

MT2 - MT2



#### Extension Weldon 50 mm

19.05 mm (3/4") Weldon, 50 mm (2") extension, outer Ø 35 mm (1 3/8") For 6.35 mm (1/4") pilot pins

## IBK.50

For 8 mm (5/16") pilot pins

IBK.50/8



## Extension Weldon 100 mm

19.05 mm (3/4") Weldon, 100 mm (3 15/16") extension, outer Ø 35 mm (1 3/8") For 6.35 mm (1/4") pilot pins

# IBK.100

For 8 mm (5/16") pilot pins

IBK.100/8

MT3 - 121 mm

IBK.MC3-L121

MT3 - 450 mm

IBK.MC3-L450

extension

MT3 - MT3

extension

MT3 - MT3



# Connections



# **Adapter Nitto One Touch**

(external) to 19.05 mm (3/4") Weldon (internal)



# Adapter Fein Quick-In

(external) to 19.05 mm (3/4") Weldon (internal)

IBK.QFN



# Adapter 19.05 mm Weldon

(external) to 1/2" x 20 UNF

IBK.14



#### Adapter 19.05 mm Weldon

(external) to B16 drill chuck connection

IBK.16-14



# **Reduction ring**

31.75 mm (1 1/4") Weldon (external) to 19.05 mm (3/4") Weldon (internal)

IBK.3219

# Morse Taper reductions



#### **Morse Taper reduction**

MT3 (machine) to MT2 (tool holder)

IBK.MC3-MC2



# **Morse Taper reduction**

MT4 (machine) to MT3 (tool holder)

IBK.MC4-MC3







MC.2 / MC.3

# Arbor MT2 - 19.05 mm (3/4") Weldon

For cutters Ø 12 - 60 mm

MC.2

# Arbor MT2 - 19.05 mm (3/4") Weldon

Including lubrication ring

IMC.20

## Auto Arbor MT2 - 19.05 mm (3/4") Weldon

Including lubrication ring Quick exchange, Weldon connection

IMC.2Q

# Arbor MT3 - 19.05 mm (3/4") Weldon

For cutters Ø 12 - 60 mm

мс.з

# Arbor MT3 - 19.05 mm (3/4") Weldon

For cutters Ø 12 - 60 mm

With extended shaft, including lubrication ring

# Arbor MT3 - 19.05 mm (3/4") Weldon

Including lubrication ring

IMC.30/19-N

# Auto Arbor MT3 - 19.05 mm (3/4") Weldon

Including lubrication ring Quick exchange, Weldon connection

IMC.3Q

# Arbor MT3 - 31.75 mm (1 1/4") Weldon

For cutters Ø 61 - 100 mm

MC.3/32

# Arbor MT3 - 31.75 mm (1 1/4") Weldon

Including lubrication ring

IMC.30/32-N

# Arbor MT4 - 31.75 mm (1 1/4") Weldon

Including lubrication ring

IMC.40/32

# Arbor MT4 - 31.75 mm (1 1/4") Weldon

Including lubrication ring

ECO200.MC4/32





Assembly of a shorter extension adapter IBK.15 for use with drill chucks.

increases space for twist drills

IBK.15 with a drill chuck IBQ.13Q for illustration purpose

Adapter 1/2" x 20 UNF (external) to 1/2" x 20 UNF (internal) extension adapter for drill chucks fitting length 65 mm

IBK.15

# Drill chuck connections



Morse Taper 2 to B16

Spindle connection

B16-MC2

# Morse Taper 2 to B18

Spindle connection

B18-MC2



Morse Taper 3 to B16

Spindle connection

B16-MC3

# Morse Taper 3 to B18

Spindle connection

B18-MC3



Morse Taper 2 to 1/2" x 20 UNF

Spindle connection
1/2UNF-MC2



Morse Taper 3 to 1/2" x 20 UNF

Spindle connection

1/2UNF-MC3

# Twist drill chucks



Drill chuck

DIA Ø 1.5 - 13 mm, 1/2" x 20 UNF connection

IBK.13



# Drill chuck quick connect

DIA Ø 2 - 13 mm 1/2" x 20 UNF connection Keyless

IBK.13Q



# **Drill chuck**

DIA Ø 1.5 - 13 mm B16 connection

IBK.13-B16



# **Drill chuck**

DIA Ø 1.5 - 16 mm B16 connection

IBK.16



# **Drill chuck quick connect**

DIA Ø 1.5 - 13 mm 1/2" x 20 UNF connection Keyless

IBQ.13



# Drill chuck quick connect

DIA Ø 1.5 - 16 mm B16 connection Keyless

IBQ.16

The IBQ.13 and IBQ.16 Quick connect drill chucks are keyless, three-jaw, self-centering chucks that hold drill bits in place during drilling tasks. They can be used with magnetic drilling machines together with Euroboor accessories like IBK.14, IBK.15 and 1/2" x 20 UNF Morse Taper.



# Cutting lubricants

Euroboor spends a lot of time and effort on pushing boundaries to make your drilling process far more efficient. This continuous research and development is reflected in superior quality magnetic drilling machines, annular cutters and all other kinds of tools and accessories. While this lays the basis for optimum drilling and cutting performance, there is also the hugely important, often underestimated, factor of proper cooling and lubrication.

However sharp, stable or fast a cutting tool may be, working with metal is a demanding job which generates friction and heat, impacting end result, processing time and durability.

#### Lubrication

A suitable lubricant will reduce friction greatly. The tool will set itself much better and will generate less vibrations. A smoother operation means less power needs to be put into the job, the finished result will be more precise and operation time can be reduced by up to 30%.

#### Cooling

Processing metals can, as generally known, produce a lot of heat. Overheating can have serious negative effects on the behaviour of the workpiece and tool, and thus the overall performance. The result is generally an increased processing time, but not being

able to complete the job might even be possible as well. Inappropriate cooling can lead to specific issues, such as unreliable slug ejection when working with annular cutters.

#### Protection

For example, think about the discolouration of your metal workpiece or about the sizing accuracy of drilled holes after cooling down. When pushing your cutting tools fast and hard, burning them up might even be possible quicker than you would have imagined. With the use of appropriate lubrication and cooling you are able to actively protect the workpiece and used tools.

#### Durability

Making sure a cutting tool is able to perform smoothly and constantly by proper cooling and lubrication will increase its functional life significantly. Taking annular cutting as an example, both the drilling machine and cutter will benefit from the drastically reduced stress. Depending on circumstances, an annular cutter can last up to 5 times longer when properly taken care of during operation!

#### Our offering

Euroboor offers a wide range of well-considered cooling and lubrication products to match your requirements. If you are processing high-tensile strength stainless steel or need to cut a plain aluminium bar, create large-bore holes or prepare a fine-coarse thread, whether working on a drilling line or in difficult spots on location, we can help you out with just the right lubricant.

# The use of appropriate cutting lubricant adds value to your business operation

- Higher quality workpiece finishing
- · Minimised tool wear and replacement
- Reduced processing time & lower operation cost

Materi	al applica	ation	Optimal C	Good	Possible										
	Material	Plastics GRP/ CRP	Brass, Copper, Tin	Grey cast iron	Steel	Steel					Stainless steel		Aluminium		Rails
Oil					< 500N	< 750N	< 900N	< 1,100N	< 1,400N	< 900N	≤ 900N	< 10% Si	≤ 10% Si		
IBO.10	<b>८</b> '	0	0	0	•	•	•	•	•	0	0	0	0	0	0
IBO.P91	1 👺	0	0	0	•	•	•	•	•	0	0	0	0	0	0
IBO.20	<b>△'</b>	0		•	0	0	0	0	0	•	•			•	•
IBO.50	<b>▲'</b>	0	•	0	0	0	0	0	0	0	0	•	•	0	0
IBO.60	٨.	0	0	0	•	•	•	•	•	0	0	0	0	0	0
MV.4	<b>♦</b> '	0	0	0	•	•	•	•	•	0	0	0	0	0	0
IBO.30	<u>•</u>	0	0	0	•	•	•	•	•	0	0	0	0	0	0
IBP.70	40			•	•	•	•	•	•	•	•			•	•

This overview only offers an indication of use. Further information on lubrication and material behaviour on request. Always try the chosen cutting lubricant on a test piece first.

<sup>\*</sup> Inconnell, Nimonic, HARDOX and Hastelloy

# Cutting oils, sprays, paste and gearbox oil

# General usage

#### **IBO.10**

#### Mild steel lubricating and cooling cutting oil

General cutting oil offering premium cooling and lubrication for most common mild steel projects. High-cutting power tool preservation and improved processing times.

# IBO.1001 (1 litre)

IBO.1050 (5 liters)



#### MV.4

#### All metals lubricating and cooling concentrate

User and environmentally friendly water-soluble cooling and lubricating concentrate. Particularly suitable for automatic dosing systems, offering efficient cooling on the majority of metal workpieces. No harmful mist formation and economical in use (can be diluted up to 1:20 ratio).

#### MV.4001 (1 litre)

MV.4050 (5 liters)



# Specialised usage

# IBO.20

# Inox, chromium and nickel lubricating and cooling cutting oil

Heavy duty cutting oil with extremely efficient lubricating and cooling properties, solely for use on hard (plated) materials such as stainless steel, chromium and nickel. Drill up to two times faster, while minimising the chance of burnt tool bits and discoloured workpieces.

# IBO.2001 (1 litre)

IBO.2050 (5 liters)



#### **IBO.50**

#### Non-ferrous metals cutting oil

Mild paraffin-based mineral oil with excellent lubricating possibilities for softer, non-ferrous, metals such as aluminium, copper and zinc. Highly effective in preventing discoloration and deformation of the workpiece and enhancing drilling performance.

#### IBO.5001 (1 litre)

IBO.5050 (5 liters)

#### **IBO.60**

## Tapping and threading oil

Universal non-staining cutting oil, specifically for tapping and threading. Offers consistent lubrication and enhances the precision of your operation. The unique properties actively help chip clearance and keep your tools sharp.

## IBO.6001 (1 litre)

IBO.6050 (5 liters)







## IBO-P.911

# Mild steel lubricating and cooling cutting oil spray

Premium metal processing cooling and lubrication in spray can form, suitable for use on mild steel. Highly versatile in use and

ideal for tool preparation.

IBO-P.911.500 (500 ml)



#### **IBO.30**

# All metals lubricating and cooling cutting oil spray

Versatile spray with high-cooling and evaporation properties. Ideal for the (after) cooling of all workpieces and tools. The minimal harmful contents and minimal greasy residue facilitate further proceedings with the workpiece.

IBO.30 (500 ml)

# IBP.70

# High-alloy steel cutting paste

A cutting compound for metal, with strong adhesive strength on materials and tools, for vertical and upside down applications where liquid metal working oils can't be used. Based on mineral oil with carefully selected extreme pressure additives with excellent lubricating properties for low tool wear and excellent surface quality. Suitable for drilling, milling, tapping, threading and punching of high-alloy steel grades.

IBP.70 (1 liters)



# Gearbox oil

#### IBO.G1

Offered as official Euroboor spare part, IBO.G1 is the recommended oil for Euroboor magnetic drilling machines with oil lubricated gearboxes. This is the only gear lubricant which is able to meet our high-requirements for operating temperature, minimal wear and high-machine efficiency.

#### For use with:

ECO.30s+, ECO.40S, ECO.40s+, ECO.50S, ECO.50s+, ECO.55S/T, ECO.55s+/T, ECO.55s+/TA, ECO.60S, ECO.60s+, ECO.80s+, ECO.100s+/T, ECO.100s+/TD, TUBE.30s+ and TUBE.55S/T, TUBE.55s+/T.

IBO.G101 (1 litre)





# Multifunctional oil spray



# Operational use:

- Rust removing
- Lubricating
- · Contact improving
- Cleaning
- Corrosion protective
- Moisture repellent

#### **IBO.40**

Universal problem solving and preventing spray, suitable for the maintenance of tools and other moving parts. Also suitable as protector of electronics. Does not contain silicones, water or graphite.

IBO.40 (400 ml)



# Euroboor Annular cutters

# **Annular cutters**

- + Longer lifespan
- + Exact dimensions
- + Unique teeth geometry
- Optimum chip clearance
- + Superior slug ejection



# High-precision shanks, various connections



Weldon 19.05 mm (3/4")



WelNit 19.05 mm (3/4")



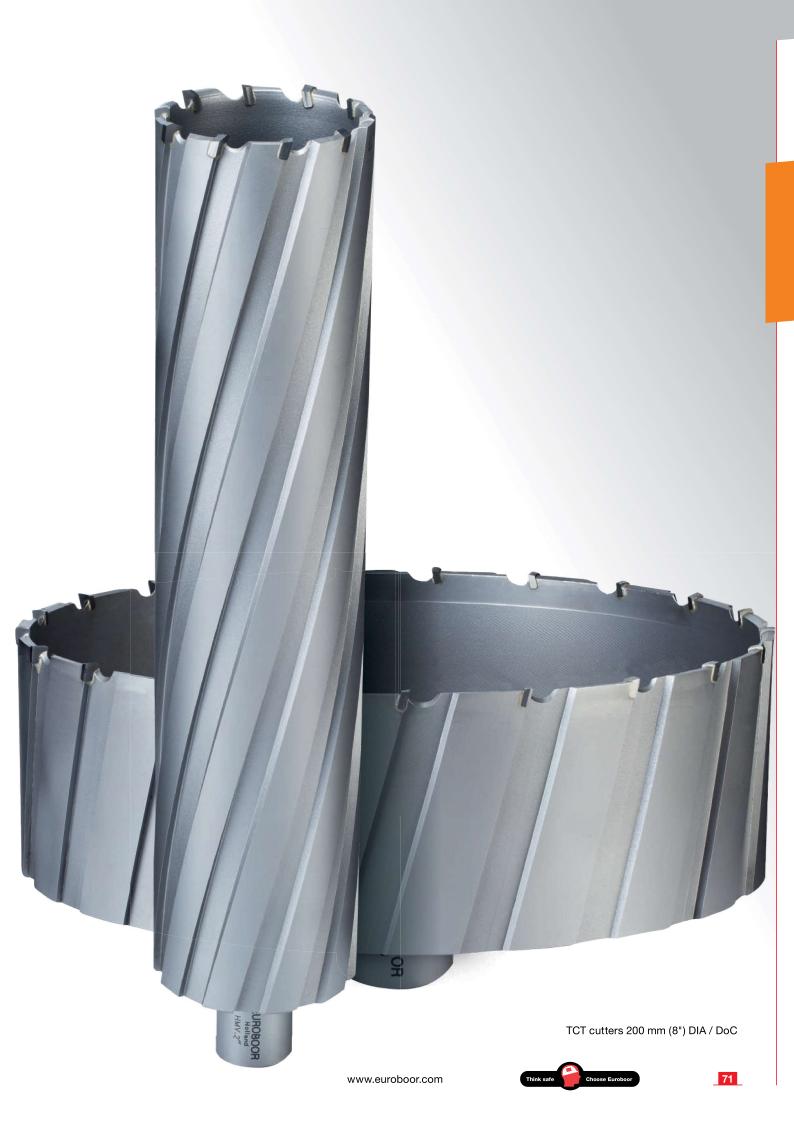
Weldon 31.75 mm (1 1/4")

# **Pilot pins**

Pilot pins are essential for the use of annular cutters, as they provide the following practical uses:

- Centration of cutter
- Control of oil flow
- Slug ejection
- 1. Pilot pin
- 2. Annular cutter
- 3. Pilot pin inside annular cutter
- 4. Place in arbor magnetic drilling machine and





# Euroboor annular cutter portfolio

# Geometry

# Altering cutting teeth angles for precise and clear cuts

On our HSS and TCT cutters every tooth does its own job, working together to cut cleaner and quicker. They actually save time!



TCT cutters have three different teeth



HSS cutters have two different teeth

# Did you know?

- With the right lubrication tool life is drastically improved;
- Drilling with cutters is best with internal cooling;
- A perfect fitting pilot pin prevents cutter breakage;
- TCT cutters need a higher speed than HSS cutters:
- Euroboor HSS cutters have an extra landing on the outside and cut more accurate with less friction;
- Euroboor cutters have a grounded inside which offers expansion room to slug;
- Metric & imperial specific sizes and shank variations can be supplied on request.

Weldon shank

# Shank

Euroboor annular cutters are standard equipped with highprecision Weldon shanks. Depending on the cutter size and specification; 19.05 mm (3/4") or 31.75 mm (1 1/4"). Additionally we also offer cutters with double shank design. These annular cutters have an increased practical application, as they are suitable for use on machinery requiring Weldon fitment as well as machinery with Nitto fitment.



WelNit shank

# The No. 1 choice in HSS, HSS-Cobalt and TCT

We offer a well-considered range of annular cutters, designed to exceed your requirements. Many years of our hands-on experience are reflected in the unique features of our cutters. We do not compromise on quality and for that reason our cutters are appreciated worldwide for optimum performance, durability and longer functional life in all industries. From small scale fabrication to the oil and shipping industry, and from large scale fabrication to construction, and beyond.





# Annular cutter overview

Depth of Cut (DoC)			Ø Metric (mm) Weldon	Ø Metric (mm) WelNit	Ø Imperial (inch) Weldon	Ø Imperial (inch) WelNit	
25 mm		TCT Rail		17 - 36	-	-	-
30 mm	1"	HSS		12 - 100	12 - 60	7/16" - 4"	-
30 mm	1"	HSS-Cobalt	8%	12 - 60	-	7/16" - 25/16"	-
35 mm	1"	TCT		12 - 100	12 - 60	7/16" - 4"	7/16" - 2 5/16"
35 mm		TCT Rail		17 - 36	-	-	-
55 mm	2"	HSS		12 - 100	12 - 60	7/16" - 4"	7/16" - 2 5/16"
55 mm	2"	HSS Stack		18 - 32	-	11/16" - 1 1/4"	-
55 mm	2"	HSS-Cobalt	8%	12 - 60	-	7/16" - 25/16"	-
55 mm	2"	TCT		12 - 200	12 - 60	7/16" - 8"	7/16" - 2 5/16"
75 mm		HSS		14 - 50	-	-	-
75 mm	3"	HSS Stack		18 - 32	-	11/16" - 1 1/4"	-
	3"	HSS-Cobalt	8%	-	-	7/16" - 25/16"	-
75 mm	3"	TCT		12 - 50	-	7/16" - 3"	-
100 mm		HSS		18 - 50	-	-	-
100 mm	4"	тст		12 - 200	-	7/16" - 8"	-
150 mm	6"	TCT		22 - 200	-	7/8" - 8"	-
200 mm	8"	тст		22 - 200	-	7/8" - 8"	-

Material	appliance	<ul><li>Optima</li></ul>	O Good	O Poss	ible										
			Brass,	Grey	Steel	Steel					Stainless steel		n	Exotic	Rails
Cutter		GRP/ CRP	Copper, Tin	cast iron	< 500N	< 750N	< 900N	< 1,100N	< 1,400N	< 900N	≤ 900N	< 10% Si	≤ 10% Si	materials*	
HSS	179	•	0		•	•	0					0			
HSS-Coba	alt	•	•	0	•	•	•	0	0	0	0	•	0	0	
тст	17/1		0	•	•	•	•	•	•	•	•	•	•	•	0
TCT Rail	-		0	•	•	•	•	•	•	•	•	•	•	•	•

\* Inconnell, Nimonic, HARDOX, Hastelloy



# Annular cutter

# High Speed Steel

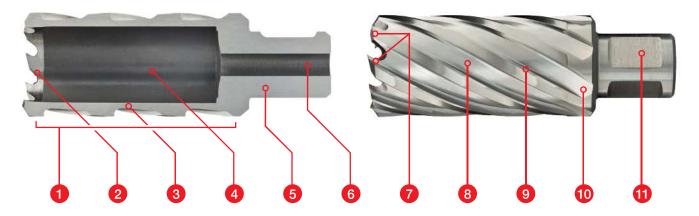


HSS annular cutters, with unique teeth geometry, provide clear cutting, fast feed rate, less vibration, smooth hole surface and long tool life. They are better and quicker than twist drills. HSS annular cutters can be used on all kinds of magnetic drilling machines. They can be widely used in drilling steel, copper, aluminium, stainless

steel and plastic, in either plate or pipe form. The HSS annular cutters have gained huge popularity in the market. The entire range is available in various specifications that can be customised as per your requirements.

HSS mat	HSS material application Optimal O Good O Possible												
Plastics GRP/CRP	Brass, Copper, Tin	Grey cast iron	Steel					Stainless	steel	Aluminiu	m	Exotic materials, Inconnell, Nimonic, HARDOX,	Rails
			< 500N	< 750N	< 900N	< 1,100N	< 1,400N	< 900N	≤ 900N	< 10% Si	≤ 10% Si		
•	0		•	•	0					0			

# **HSS** profile



- Stage hardening. Combines maximum hardness at the teeth with superior strength at the cutter body, reducing breakage to a minimum.
- Inner ground cutting teeth.
  Helps stable "setting" of
  the cutter, reduces friction
  during drilling and helps slug
  ejection.
- Wall thickness matched to the diameter of the cutter, combining the best possible cutting time with strength.
- Tapered inside fitment prevents the cutter getting stuck. Guaranteed slug ejection with usage of the correct pilot pin.
- Precise shank fitment for maximum interchangeability and close tolerance drilling without run-out.
- Precise pilot pin fitment for perfect centration, hassle-free pin retraction and controlled lubricant flow.
- Altering "continuous pre-cut" teeth geometry. Generates faster and more stable drilling
- performance and results in clear cuts of the highest precision and smooth, burrfree finishes.
- Well-thought-out spiral flute angles for optimal chip removal.
- Specially designed blades for optimum stability and heatreduction.
- Number of flutes and teeth matched to the diameter of the cutter for the best tooth load and superior cutting speeds.
- Precision ground shanks for optimum fitment of the cutter itself in the tool holder and of pilot pin in the annular cutter. Increases safety, stability and accurate hole dimensions.

	DoC 30 mm Weldon	DoC 30 mm WelNit	DoC 55 mm Weldon	DoC 55 mm WelNit	DoC 75 mm Weldon	DoC 100 mm Weldon
DIA	Ø 12 - 100 mm	Ø 12 - 60 mm	Ø 12 - 100 mm	Ø 12 - 60 mm	Ø 14 - 50 mm	Ø 18 - 50 mm
	Code	Code	Code	Code	Code	Code
Ø 12	HCS.120	HCSU.120	HCL.120	HCLU.120	HCY.120	HCX.120
Ø 13	HCS.130	HCSU.130	HCL.130	HCLU.130	HCY.130	HCX.130
Ø 13.5	HCS.135		HCL.135			
Ø 14	HCS.140	HCSU.140	HCL.140	HCLU.140	HCY.140	HCX.140
Ø 15	HCS.150	HCSU.150	HCL.150	HCLU.150	HCY.150	HCX.150
Ø 15.5	HCS.155		HCL.155			
Ø 16	HCS.160	HCSU.160	HCL.160	HCLU.160	HCY.160	HCX.160
Ø 17	HCS.170	HCSU.170	HCL.170	HCLU.170	HCY.170	HCX.170
Ø 17.5	HCS.175		HCL.175			
Ø 18	HCS.180	HCSU.180	HCL.180	HCLU.180	HCY.180	HCX.180
Ø 19	HCS.190	HCSU.190	HCL.190	HCLU.190	HCY.190	HCX.190
Ø 19.5	HCS.195		HCL.195			
Ø 20	HCS.200	HCSU.200	HCL.200	HCLU.200	HCY.200	HCX.200
Ø 21	HCS.210	HCSU.210	HCL.210	HCLU.210	HCY.210	HCX.210
Ø 21.5	HCS.215		HCL.215			
Ø 22	HCS.220	HCSU.220	HCL.220	HCLU.220	HCY.220	HCX.220
Ø 23	HCS.230	HCSU.230	HCL.230	HCLU.230	HCY.230	HCX.230
Ø 24	HCS.240	HCSU.240	HCL.240	HCLU.240	HCY.240	HCX.240
Ø 25	HCS.250	HCSU.250	HCL.250	HCLU.250	HCY.250	HCX.250
Ø 26	HCS.260	HCSU.260	HCL.260	HCLU.260	HCY.260	HCX.260
Ø 26.5	HCS.265		HCL.265		1	
Ø 27	HCS.270	HCSU.270	HCL.270	HCLU.270	HCY.270	HCX.270
Ø 28	HCS.280	HCSU.280	HCL.280	HCLU.280	HCY.280	HCX.280
Ø 29	HCS.290	HCSU.290	HCL.290	HCLU.290	HCY.290	HCX.290
Ø 30	HCS.300	HCSU.300	HCL.300	HCLU.300	HCY.300	HCX.300
Ø 31	HCS.310	HCSU.310	HCL.310	HCLU.310	HCY.310	HCX.310
Ø 32	HCS.320	HCSU.320	HCL.320	HCLU.320	HCY.320	HCX.320
Ø 33	HCS.330	HCSU.330	HCL.330	HCLU.330	HCY.330	HCX.330
Ø 34	HCS.340	HCSU.340	HCL.340	HCLU.340	HCY.340	HCX.340
Ø 35	HCS.350	HCSU.350	HCL.350	HCLU.350	HCY.350	HCX.350
Ø 36 Ø 37	HCS.360 HCS.370	HCSU.360 HCSU.370	HCL 370	HCLU.360 HCLU.370	HCY.360	HCX.360
Ø 38	HCS.380	HCSU.380	HCL.370 HCL.380	HCLU.380	HCY.370 HCY.380	HCX.380
Ø 39						
	HCS.390	HCSU.390	HCL.390	HCLU.390	HCY.390	HCX.390
Ø 40	HCS.410	HCSU.410	HCL.400	HCLU.400	HCY.400	HCX.400
Ø 41	HCS.410	HCSU.410	HCL.410	HCLU.410	HCY.410	HCX.410
Ø 42	HCS.420	HCSU.420	HCL.420	HCLU.420	HCY.420	HCX.420
Ø 43	HCS.430	HCSU.430	HCL.430	HCLU.430	HCY.430	HCX.430
Ø 44	HCS.440	HCSU.440	HCL.440	HCLU.440	HCY.440	HCX.440
Ø 45	HCS.450	HCSU 460	HCL 460	HCLU.450	HCY.450	HCX.450
Ø 46	HCS.460	HCSU.460	HCL 470	HCLU.460	HCY.460	HCX.460
Ø 47	HCS.470	HCSU.470	HCL.470	HCLU.470	HCY.470	HCX.470
Ø 48	HCS.480	HCSU.480	HCL.480	HCLU.480	HCY.480	HCX.480
Ø 49	HCS.490	HCSU.490	HCL.490	HCLU.490	HCY.490	HCX.490
Ø 50	HCS.500	HCSU.500	HCL.500	HCLU.500	HCY.500	HCX.500
Ø 51	HCS.510	HCSU.510	HCL.510	HCLU.510		
Ø 52	HCS.520	HCSU.520	HCL.520	HCLU.520		
Ø 53	HCS.530	HCSU.530	HCL.530	HCLU.530		
Ø 54	HCS.540	HCSU.540	HCL.540	HCLU.540		
Ø 55	HCS.550	HCSU.550	HCL.550	HCLU.550		
Ø 56	HCS.560	HCSU.560	HCL.560	HCLU.560		



Weldon shank



WelNit shank



Shank sizes

DIA Ø 12 - 60 mm: 19.05 mm (3/4")

DIA Ø 61 - 100 mm: 31.75 mm (1 1/4")



DoC Depth of Cut measured inside cutter

# DoC 75 mm (HCY)

DIA Ø 51 - 100 mm: Available on request

# DoC 100 mm (HCX)

DIA Ø 51 - 100 mm: Available on request



Weldon shank



WelNit shank



Shank sizes

DIA Ø 12 - 60 mm: 19.05 mm (3/4")

DIA Ø 61 - 100 mm: 31.75 mm (1 1/4")



Depth of Cut measured inside cutter

	DoC 30 mm Weldon	DoC 30 mm WelNit	DoC 55 mm Weldon	DoC 55 mm WelNit	DoC 75 mm Weldon	DoC 100 mm Weldon
DIA	Ø 12 - 100 mm	Ø 12 - 60 mm	Ø 12 - 100 mm	Ø 12 - 60 mm	Ø 14 - 50 mm	Ø 18 - 50 mm
	Code	Code	Code	Code	Code	Code
Ø 57	HCS.570	HCSU.570	HCL.570	HCLU.570		
Ø 58	HCS.580	HCSU.580	HCL.580	HCLU.580		
Ø 59	HCS.590	HCSU.590	HCL.590	HCLU.590		
Ø 60	HCS.600	HCSU.600	HCL.600	HCLU.600		
Ø 61	HCS.610		HCL.610			
Ø 62	HCS.620		HCL.620			
Ø 63	HCS.630		HCL.630			
Ø 64	HCS.640		HCL.640			
Ø 65	HCS.650		HCL.650			
Ø 66	HCS.660		HCL.660			
Ø 67	HCS.670		HCL.670			
Ø 68	HCS.680		HCL.680			
Ø 69	HCS.690		HCL.690			
Ø 70	HCS.700		HCL.700			
Ø 71	HCS.710		HCL.710			
Ø 72	HCS.720		HCL.720			
Ø 73	HCS.730		HCL.730			
Ø 74	HCS.740		HCL.740			
Ø 75	HCS.750		HCL.750			
Ø 76	HCS.760		HCL.760			
Ø 77	HCS.770		HCL.770			
Ø 78	HCS.780		HCL.780			
Ø 79	HCS.790		HCL.790			
Ø 80	HCS.800		HCL.800			
Ø 81	HCS.810		HCL.810			
Ø 82	HCS.820		HCL.820			
Ø 83	HCS.830		HCL.830			
Ø 84	HCS.840		HCL.840			
Ø 85	HCS.850		HCL.850			
Ø 86	HCS.860		HCL.860			
Ø 87	HCS.870		HCL.870			
Ø 88	HCS.880		HCL.880			
Ø 89	HCS.890		HCL.890			
Ø 90	HCS.900		HCL.900			
Ø 91	HCS.910		HCL.910			
Ø 92	HCS.920		HCL.920			
Ø 93	HCS.930		HCL.930			
Ø 94	HCS.940		HCL.940			
Ø 95	HCS.950		HCL.950			
Ø 96	HCS.960		HCL.960			
Ø 97	HCS.970		HCL.970			
Ø 98	HCS.980		HCL.980			
Ø 99	HCS.990		HCL.990			
Ø 100	HCS.1000		HCL.1000			
	_					

# DoC 75 mm (HCY)

DIA Ø 51 - 100 mm: Available on request

# DoC 100 mm (HCX)

DIA Ø 51 - 100 mm: Available on request

	DoC 1" Weldon	DoC 2" Weldon	DoC 2" WelNit
DIA	Ø 7/16" - 4"	Ø 7/16" - 4"	Ø 7/16" - 2 5/16
	Code	Code	Code
Ø 7/16"	HCS.7/16"	HCL.7/16"	HCLU.7/16"
Ø 1/2"	HCS.1/2"	HCL.1/2"	HCLU.1/2"
Ø 9/16"	HCS.9/16"	HCL.9/16"	HCLU.9/16"
Ø 5/8"	HCS.5/8"	HCL.5/8"	HCLU.5/8"
Ø 11/16"	HCS.11/16"	HCL.11/16"	HCLU.11/16"
Ø 3/4"	HCS.3/4"	HCL.3/4"	HCLU.3/4"
Ø 13/16"	HCS.13/16"	HCL.13/16"	HCLU.13/16"
Ø 7/8"	HCS.7/8"	HCL.7/8"	HCLU.7/8"
Ø 15/16"	HCS.15/16"	HCL.15/16"	HCLU.15/16"
Ø 1"	HCS.1"	HCL.1"	HCLU.1"
Ø 1 1/16"	HCS.1-1/16"	HCL.1-1/16"	HCLU.1-1/16"
Ø 1 1/8"	HCS.1-1/8"	HCL.1-1/8"	HCLU.1-1/8"
Ø 1 3/16"	HCS.1-3/16"	HCL.1-3/16"	HCLU.1-3/16"
Ø 1 1/4"	HCS.1-1/4"	HCL.1-1/4"	HCLU.1-1/4"
Ø 1 5/16"	HCS.1-5/16"	HCL.1-5/16"	HCLU.1-5/16"
Ø 1 3/8"	HCS.1-3/8"	HCL.1-3/8"	HCLU.1-3/8"
Ø 1 7/16"	HCS.1-3/6	HCL.1-7/16"	HCLU.1-7/16"
Ø 1 1/2"	HCS.1-1/2"	HCL.1-1/2"	HCLU.1-1/2"
Ø 1 9/16"	HCS.1-9/16"	HCL.1-9/16"	HCLU.1-9/16"
Ø 1 5/8"	HCS.1-5/8"	HCL.1-5/8"	HCLU.1-5/8"
Ø 1 11/16"	HCS.1-11/16"	HCL.1-11/16"	HCLU.1-11/16"
Ø 1 3/4"	HCS.1-3/4"	HCL.1-3/4"	HCLU.1-3/4"
Ø 1 13/16"	HCS.1-13/16"	HCL.1-13/16"	HCLU.1-13/16"
Ø 1 7/8"	HCS.1-7/8"	HCL.1-7/8"	HCLU.1-7/8"
Ø 1 15/16"	HCS.1-15/16"	HCL.1-15/16"	HCLU.1-15/16"
Ø 2"	HCS.2"	HCL.2"	HCLU.2"
Ø 2 1/16"	HCS.2-1/16"	HCL.2-1/16"	HCLU.2-1/16"
Ø 2 1/8"	HCS.2-1/8"	HCL.2-1/8"	HCLU.2-1/8"
Ø 2 3/16"	HCS.2-3/16"	HCL.2-3/16"	HCLU.2-3/16"
Ø 2 1/4"	HCS.2-1/4"	HCL.2-1/4"	HCLU.2-1/4"
Ø 2 5/16"	HCS.2-5/16"	HCL.2-5/16"	HCLU.2-5/16"
Ø 2 3/8"	HCS.2-3/8"	HCL.2-3/8"	
Ø 2 7/16"	HCS.2-7/16"	HCL.2-7/16"	
Ø 2 1/2"	HCS.2-1/2"	HCL.2-1/2"	
Ø 2 9/16"	HCS.2-9/16"	HCL.2-9/16"	
Ø 2 5/8"	HCS.2-5/8"	HCL.2-5/8"	
Ø 2 11/16"	HCS.2-11/16"	HCL.2-11/16"	
Ø 2 3/4"	HCS.2-3/4"	HCL.2-3/4"	
Ø 2 13/16"	HCS.2-13/16"	HCL.2-13/16"	
Ø 2 7/8"	HCS.2-7/8"	HCL.2-7/8"	
Ø 2 15/16"	HCS.2-15/16"	HCL.2-15/16"	
Ø 3"	HCS.3"	HCL.3"	
Ø 3 1/16"	HCS.3-1/16"	HCL.3-1/16"	
Ø 3 1/8"	HCS.3-1/8"	HCL.3-1/8"	
Ø 3 3/16"	HCS.3-3/16"	HCL.3-3/16"	
Ø 3 1/4"	HCS.3-1/4"	HCL.3-1/4"	
Ø 3 5/16"	HCS.3-5/16"	HCL.3-5/16"	
Ø 3 3/8"	HCS.3-3/8"	HCL.3-3/8"	
Ø 3 7/16"	HCS.3-7/16"	HCL.3-7/16"	
Ø 3 1/2"	HCS.3-1/2"	HCL.3-1/2"	
		HCL.3-9/16"	



Weldon shank



WelNit shank



# Shank sizes

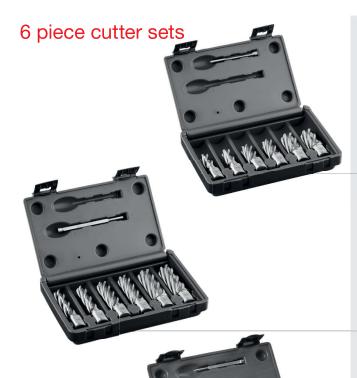
DIA Ø 7/16" - 2 5/16": 3/4"

DIA Ø 2 3/8" - 4": 1 1/4"



DoC Depth of Cut measured inside cutter

	DoC 1" Weldon	DoC 2" Weldon	DoC 2" WelNit
DIA	Ø 7/16" - 4"	Ø 7/16" - 4"	Ø 7/16" - 2 5/16"
	Code	Code	Code
Ø 3 5/8"	HCS.3-5/8"	HCL.3-5/8"	
Ø 3 11/16"	HCS.3-11/16"	HCL.3-11/16"	
Ø 3 3/4"	HCS.3-3/4"	HCL.3-3/4"	
Ø 3 13/16"	HCS.3-13/16"	HCL.3-13/16"	
Ø 3 7/8"	HCS.3-7/8"	HCL.3-7/8"	
Ø 3 15/16"	HCS.3-15/16"	HCL.3-15/16"	
Ø 4"	HCS.4"	HCL.4"	



# Set HSS metric

# DoC 30 mm

- 6 piece annular cutter set
- Cutter sizes Ø 14, 18, 22 mm (2 of each DoC)
- Pilot pin IBC.70 included

## HCS.KIT

# Set HSS imperial

# DoC 1"

- 6 piece annular cutter set
- Cutter sizes Ø 9/16", 11/16", 13/16"
   (2 of each DoC)
- Pilot pin IBC.70 included

# HCS.KIT/8

# DoC 55 mm

- 6 piece annular cutter set
- Cutter sizes Ø 14, 18, 22 mm (2 of each DoC)
- Pilot pin IBC.90 included

# HCL.KIT

# DoC 1" & 2 "

- 6 piece annular cutter set
- Cutter sizes Ø 9/16", 11/16", 13/16"
   (1 of each DoC)
- Pilot pins IBC.70 & IBC.90 included

# HCS.KIT/9

# 10 piece cutter sets



## DoC 30 mm

- 10 piece annular cutter set
- Cutter sizes Ø 12, 14, 16, 18, 20, 22, 24, 26, 28, 30 mm
- Pilot pin IBC.70 included

# HCS.KIT/10

# DoC 30 mm

- 10 piece annular cutter set
- Cutter sizes 3 x Ø 14, 3 x Ø 18, 2 x Ø 22, 2 x Ø 26 mm
- 2 x Pilot pin IBC.70 included

# HSS.KIT/10S-M2

# DoC 1"

- 10 piece annular cutter set
- Cutter sizes 2 x Ø 9/16", 2 x Ø 11/16", 2 x Ø 13/16", 2 x Ø 7/8", Ø 15/16", Ø 1"
- 2 x Pilot pin IBC.70 included

# HSS.KIT/10S-I1

# DoC 1"

- 10 piece annular cutter set
- Cutter sizes 3 x Ø 9/16", 3 x Ø 13/16", 3 x Ø 7/8", Ø 15/16"
- 2 x Pilot pin IBC.70 included

# HSS.KIT/10S-I2



# DoC 55 mm

- 10 piece annular cutter set
- Cutter sizes Ø 12, 14, 16, 18, 20, 22, 24, 26, 28, 30 mm
- 2 x Pilot pin IBC.90 included

# HCL.KIT/10

# DoC 55 mm

- 10 piece annular cutter set
- Cutter sizes 3 x Ø 14, 3 x Ø 18, 2 x Ø 22, 2 x Ø 26 mm
- 2 x Pilot pin IBC.90 included

# HSS.KIT/10L-M2

# DoC 2"

- 10 piece annular cutter set
- Cutter sizes 2 x Ø 9/16", 2 x Ø 11/16", 2 x Ø 13/16", 2 x Ø 7/8", Ø 15/16", Ø 1"
- 2 x Pilot pin IBC.90 included

# HSS.KIT/10L-I1

# DoC 2"

- 10 piece annular cutter set
- Cutter sizes 3 x Ø 9/16", 3 x Ø 13/16", 3 x Ø 7/8", Ø 15/16"
- 2 x Pilot pin IBC.90 included

# HSS.KIT/10L-I2

# Annular cutter

# High Speed Steel Stack



Standard HSS Euroboor annular cutters feature teeth geometry which is optimised for use on single layer workpieces, ensuring the fastest and best drilling performance. The rest material created with the use of these cutters is our signature: the Euroboor slug. The rim on this slug is exactly what prevents our standard HSS cutters from penetrating the second layer of material.

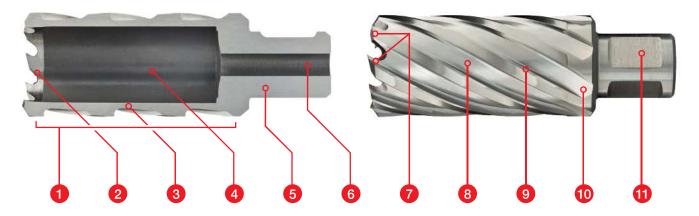
In order to drill multiple layers of material simultaneously, we recommend the use of our annular cutters with stack geometry.

The unique teeth profile ensures safe and stable penetration: layer for layer.

Combined with the standard performance improving characteristics of Euroboor annular cutters this results in smooth layer transitions, precise and clean hole finishes and the time savings you are looking for.

HSS stac	k material	application	Optir	nal <b>O</b> Go	od O Pos	ssible							
Plastics GRP/CRP	Brass, Copper, Tin	Grey cast iron	Steel					Stainless	ainless steel Aluminium		Exotic materials, Inconnell, Nimonic, HARDOX,	Rails	
			< 500N	< 750N	< 900N	< 1,100N	< 1,400N	< 900N	≤ 900N	< 10% Si	≤ 10% Si		
•	0		•	•	0					0			

# **HSS** profile



- Stage hardening. Combines maximum hardness at the teeth with superior strength at the cutter body, reducing breakage to a minimum.
- Extra deep inner ground cutting teeth. Helps stable "setting" of the cutter, reduces friction during drilling and helps (multiple) slug ejection.
- Wall thickness matched to the diameter of the cutter, combining the best possible cutting time with strength.
- Tapered inside fitment prevents the cutter getting stuck. Guaranteed slug(s) ejection with usage of the correct pilot pin.
- Precise shank fitment for maximum interchangeability and close tolerance drilling without run-out.
- Precise pilot pin fitment for perfect centration, hassle-free pin retraction and controlled lubricant flow.
- 7. Stack teeth geometry ensures stable and precise material
- penetration with fast cutting performance
- Well-thought-out spiral flute angles for optimal chip removal
- Specially designed blades for optimum stability and heatreduction.
- Number of flutes and teeth matched to the diameter of the
- cutter for the best tooth load and superior cutting speeds.
- Precision ground shanks for optimum fitment of the cutter itself in the tool holder and of pilot pin in the annular cutter. Increases safety, stability and accurate hole dimensions.



# HSS Stack

# Weldon shank



**Shank sizes**DIA Ø 18 - 32 mm:
19.05 mm (3/4")

DIA Ø 11/16" - 1 1/4": 3/4"

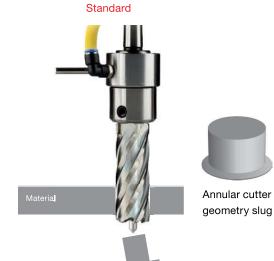


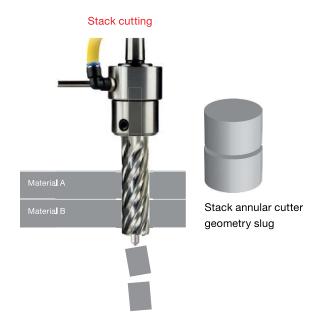


DoC
Depth
of Cut
measure
inside
cutter

	DoC 55 mm Weldon	DoC 75 mm Weldon				
DIA	Ø 18	3 - 32 mm				
	Code	Code				
Ø 18	HCPL.180	HCPY.180				
Ø 19	HCPL.190	HCPY.190				
Ø 20	HCPL.200	HCPY.200				
Ø 21	HCPL.210	HCPY.210				
Ø 22	HCPL.220	HCPY.220				
Ø 23	HCPL.230	HCPY.230				
Ø 24	HCPL.240	HCPY.240				
Ø 25	HCPL.250	HCPY.250				
Ø 26	HCPL.260	HCPY.260				
Ø 27	HCPL.270	HCPY.270				
Ø 28	HCPL.280	HCPY.280				
Ø 29	HCPL.290	HCPY.290				
Ø 30	HCPL.300	HCPY.300				
Ø 31	HCPL.310	HCPY.310				
Ø 32	HCPL.320	HCPY.320				

	DoC 2" Weldon	DoC 3" Weldon
DIA	Ø 11/16	6" - 1 1/4"
	Code	Code
Ø 11/16"	HCPL.11/16"	HCPY.11/16"
Ø 3/4"	HCPL.3/4"	HCPY.3/4"
Ø 13/16"	HCPL.13/16"	HCPY.13/16"
Ø 7/8"	HCPL.7/8"	HCPY.7/8"
Ø 15/16"	HCPL.15/16"	HCPY.15/16"
Ø 1"	HCPL.1"	HCPY.1"
Ø 1 1/16"	HCPL.1-1/16"	HCPY.1-1/16"
Ø 1 1/8"	HCPL.1-1/8"	HCPY.1-1/8"
Ø 1 3/16"	HCPL.1-3/16"	HCPY.1-3/16"
Ø 1 1/4"	HCPL.1-1/4"	HCPY.1-1/4"





# Annular cutter

# High Speed Steel Cobalt

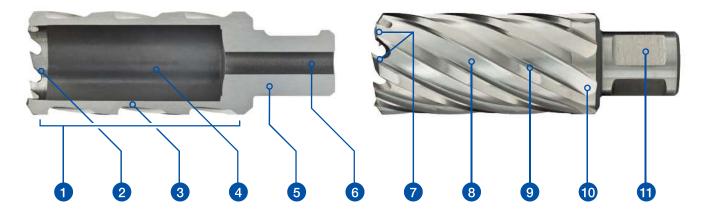


Euroboor HSS-Cobalt annular cutters are made of Molybdenum-Chromium-Vanadium-Tungsten alloy High Speed Steel with an additional 8% Cobalt (M42). The HSS-Cobalt annular cutter is specifically designed to remain cool when cutting holes. All flutes are fully ground, resulting in super-fast feed rates and smooth holes

in hard materials, providing better chip clearance and higher cutting performances. The M42 HSS-Cobalt annular cutter is widely used in the metalworking industry for its superior red hardness compared to more conventional high speed steels. This will lead to shorter cycle times in production environments due to higher cutting speeds.

HSS-Cob	alt materia	al application	on • o	ptimal O	Good O F	Possible							
Plastics Brass, Grey ca GRP/CRP Copper, iron Tin		Grey cast iron	Steel			Stainless steel		Aluminium		Exotic materials, Inconnell, Nimonic, HARDOX,	Rails		
			< 500N	< 750N	< 900N	< 1,100N	< 1,400N	< 900N	≤ 900N	< 10% Si	≤ 10% Si		
•	•	0	•	•	•	0	0	0	0	•	0	0	

# **HSS-Cobalt profile**



- Stage hardening. Combines maximum hardness at the teeth with superior strength at the cutter body, reducing breakage to a minimum.
- Inner ground cutting teeth.
  Helps stable "setting" of the
  cutter, reduces friction during
  and drilling and helps slug
  ejection.
- Wall thickness matched to the diameter of the cutter, combining the best possible cutting time with strength.
- Tapered inside fitment prevents the cutter getting stuck. Guaranteed slug ejection with usage of the correct pilot pin.
- Precise shank fitment for maximum interchangeability and close tolerance drilling without run-out.
- Precise pilot pin fitment for perfect centration, hassle-free pin retraction and controlled lubricant flow.
- 7. Altering "continuous pre-cut" teeth geometry. Generates faster and more stable drilling
- performance and results in clear cuts of the highest precision and smooth, burrfree finishes.
- Well-thought-out spiral flute angles for optimal chip removal.
- Specially designed blades for optimum stability and heatreduction.
- Number of flutes and teeth matched to the diameter of the cutter for the best tooth load and superior cutting speeds.
- Precision ground shanks for optimum fitment of the cutter itself in the tool holder and of pilot pin in the annular cutter. Increases safety, stability and accurate hole dimensions.

# HSS Cobalt

Weldon shank



**Shank sizes**DIA Ø 12 - 60 mm:
19.05 mm (3/4")

DIA Ø 7/16" - 2 5/16": 3/4"



DoC

Depth
of Cut
measured
inside
cutter

	DoC 30 mm Weldon	DoC 55 mm Weldon
DIA	Ø 12 -	60 mm
	Code	Code
Ø 12	IBS.120	IBL.120
Ø 13	IBS.130	IBL.130
Ø 14	IBS.140	IBL.140
Ø 15	IBS.150	IBL.150
Ø 16	IBS.160	IBL.160
Ø 17	IBS.170	IBL.170
Ø 18	IBS.180	IBL.180
Ø 19	IBS.190	IBL.190
Ø 20	IBS.200	IBL.200
Ø 21	IBS.210	IBL.210
Ø 22	IBS.220	IBL.220
Ø 23	IBS.230	IBL.230
Ø 24	IBS.240	IBL.240
Ø 25	IBS.250	IBL.250
Ø 26	IBS.260	IBL.260
Ø 27	IBS.270	IBL.270
Ø 28	IBS.280	IBL.280
Ø 29	IBS.290	IBL.290
Ø 30	IBS.300	IBL.300
Ø 31	IBS.310	IBL.310
Ø 32	IBS.320	IBL.320
Ø 33	IBS.330	IBL.330
Ø 34	IBS.340	IBL.340
Ø 35	IBS.350	IBL.350
Ø 36	IBS.360	IBL.360
Ø 37	IBS.370	IBL.370
Ø 38	IBS.380	IBL.380
Ø 39	IBS.390	IBL.390
Ø 40	IBS.400	IBL.400
Ø 41	IBS.410	IBL.410
Ø 42	IBS.420	IBL.420
Ø 43	IBS.430	IBL.430
Ø 44	IBS.440	IBL.440
Ø 45	IBS.450	IBL.450
Ø 46	IBS.460	IBL.460
Ø 47	IBS.470	IBL.470
Ø 48	IBS.480	IBL.480
Ø 49	IBS.490	IBL.490
Ø 50	IBS.500	IBL.500
Ø 51	IBS.510	IBL.510
Ø 52	IBS.520	IBL.520
Ø 53	IBS.530	IBL.530
Ø 54	IBS.540	IBL.540
Ø 55	IBS.550	IBL.550
Ø 56	IBS.560	IBL.560
Ø 57	IBS.570	IBL.570
Ø 58	IBS.580	IBL.580
Ø 59	IBS.590	IBL.590
Ø 60	IBS.600	IBL.600
2 00	150.000	IDE.000

Weldon         Weldon           DIA         Ø 7/16" - 2 5/16"           Code         Code           Ø 7/16"         IBS.7/16"         IBL.7/16"         IBY.7/16"           Ø 1/2"         IBS.1/2"         IBL.1/2"         IBY.1/2"           Ø 9/16"         IBS.9/16"         IBL.9/16"         IBY.9/16"           Ø 5/8"         IBS.5/8"         IBL.5/8"         IBY.5/8"           Ø 11/16"         IBS.11/16"         IBL.11/16"         IBY.11/16"           Ø 3/4"         IBS.3/4"         IBL.3/4"         IBY.3/4"           Ø 13/16"         IBS.13/16"         IBL.13/16"         IBY.13/16"           Ø 15/16"         IBS.15/16"         IBL.15/16"         IBY.15/16"           Ø 15/16"         IBS.1-1/16"         IBL.1*         IBY.15/16"           Ø 1 1/16"         IBS.1-1/16"         IBL.1*         IBY.1-1/16"           Ø 1 3/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-1/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-1/16"           Ø 1 1/2"         IBS.1-3/16"         IBL.1-5/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-7		DoC 1"	DoC 2"	DoC 3"
Code         Code           Ø 7/16*         IBS.7/16*         IBL.7/16*         IBY.7/16*           Ø 1/2*         IBS.1/2*         IBL.1/2*         IBY.1/2*           Ø 9/16*         IBS.9/16*         IBL.9/16*         IBY.9/16*           Ø 5/8*         IBS.5/8*         IBY.5/8*           Ø 11/16*         IBS.11/16*         IBL.11/16*         IBY.11/16*           Ø 3/4*         IBS.3/4*         IBL.3/4*         IBY.3/4*           Ø 13/16*         IBS.13/16*         IBL.7/8*         IBY.13/16*           Ø 7/8*         IBS.7/8*         IBL.7/8*         IBY.13/16*           Ø 15/16*         IBS.15/16*         IBL.15/16*         IBY.15/16*           Ø 1*         IBS.15/16*         IBL.1-5/16*         IBY.15/16*           Ø 1 1/18*         IBS.1-1/16*         IBY.1-1/16*         IBY.1-1/16*           Ø 1 1/8*         IBS.1-1/8*         IBL.1-1/8*         IBY.1-1/16*           Ø 1 3/16*         IBS.1-3/16*         IBL.1-3/16*         IBY.1-3/16*           Ø 1 3/16*         IBS.1-3/16*         IBL.1-3/16*         IBY.1-3/16*           Ø 1 1/2*         IBS.1-5/16*         IBL.1-5/16*         IBY.1-3/16*           Ø 1 1/4*         IBS.1-7/16*         IBL.1-7/16*		Weldon	Weldon	Weldon
Ø 7/16*         IBS.7/16*         IBL.7/16*         IBY.7/16*           Ø 1/2*         IBS.1/2*         IBL.1/2*         IBY.1/2*           Ø 9/16*         IBS.9/16*         IBL.9/16*         IBY.9/16*           Ø 5/8*         IBS.5/8*         IBL.5/8*         IBY.5/8*           Ø 11/16*         IBS.11/16*         IBL.11/16*         IBY.11/16*           Ø 3/4*         IBS.3/4*         IBL.3/4*         IBY.3/4*           Ø 13/16*         IBS.13/16*         IBL.13/16*         IBY.13/16*           Ø 7/8*         IBS.15/16*         IBL.15/16*         IBY.15/16*           Ø 15/16*         IBS.15/16*         IBL.15/16*         IBY.15/16*           Ø 1*         IBS.1*         IBL.1*         IBY.15/16*           Ø 1 1/8*         IBS.1*         IBL.1*         IBY.1*           Ø 1 1/8*         IBS.1*         IBL.1*         IBY.1*           Ø 1 3/16*         IBS.1*         IBL.1*         IBY.1*           Ø 1 3/16*         IBS.1*         IBL.1*         IBY.1*           Ø 1 3/16*         IBS.1*         IBL.1*         IBY.1*           Ø 1 3/8*         IBS.1*         IBL.1*         IBY.1*           Ø 1 1/2*         IBS.1*         IBS.1*	DIA		Ø 7/16" - 2 5/16"	
Ø 1/2"         IBS.1/2"         IBL.1/2"         IBY.1/2"           Ø 9/16"         IBS.9/16"         IBL.9/16"         IBY.9/16"           Ø 5/8"         IBS.5/8"         IBL.5/8"         IBY.5/8"           Ø 11/16"         IBS.11/16"         IBL.11/16"         IBY.11/16"           Ø 3/4"         IBS.3/4"         IBL.3/4"         IBY.3/4"           Ø 13/16"         IBS.13/16"         IBL.13/16"         IBY.13/16"           Ø 7/8"         IBS.7/8"         IBL.7/8"         IBY.7/8"           Ø 15/16"         IBS.15/16"         IBL.15/16"         IBY.15/16"           Ø 1"         IBS.1*         IBL.1*         IBY.1*           Ø 1 1/16"         IBS.1-1/16"         IBY.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-1/18"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-3/16"         IBL.1-5/16"         IBY.1-3/16"           Ø 1 3/8"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-3/8"           Ø 1 7/16"         IBS.1-1/2"         IBY.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBY.1-1/2"         IBY.1-1/2"		Code	Code	Code
Ø 9/16"         IBS.9/16"         IBL.9/16"         IBY.9/16"           Ø 5/8"         IBS.5/8"         IBL.5/8"         IBY.5/8"           Ø 11/16"         IBS.11/16"         IBL.11/16"         IBY.11/16"           Ø 3/4"         IBS.3/4"         IBL.3/4"         IBY.3/4"           Ø 13/16"         IBS.13/16"         IBL.13/16"         IBY.13/16"           Ø 7/8"         IBS.7/8"         IBL.7/8"         IBY.7/8"           Ø 15/16"         IBS.15/16"         IBL.15/16"         IBY.15/16"           Ø 1 1/16"         IBS.1-1/16"         IBY.1-5/16"         IBY.1-1/16"           Ø 1 1/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-1/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-5/16"         IBL.1-3/16"         IBY.1-5/16"           Ø 1 7/16"         IBS.1-7/16"         IBL.1-1/2"         IBY.1-7/16"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-1/2"         IBY.1-1/2"           Ø 1 9/16"         IBS.1-5/8"         IBL.1-1/2"         IBY.1-13	Ø 7/16"	IBS.7/16"	IBL.7/16"	IBY.7/16"
Ø 5/8"         IBS.5/8"         IBL.5/8"         IBY.5/8"           Ø 11/16"         IBS.11/16"         IBL.11/16"         IBY.11/16"           Ø 3/4"         IBS.3/4"         IBL.3/4"         IBY.3/4"           Ø 13/16"         IBS.13/16"         IBL.13/16"         IBY.13/16"           Ø 7/8"         IBS.7/8"         IBL.7/8"         IBY.7/8"           Ø 15/16"         IBS.15/16"         IBL.15/16"         IBY.15/16"           Ø 1"         IBS.11"         IBL.1"         IBY.15/16"           Ø 1 1/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-1/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-1/8"         IBY.1-3/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBL.1-3/8"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-7/16"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-1/2"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-13/16"         IBY.1-13/16" </td <td>Ø 1/2"</td> <td>IBS.1/2"</td> <td>IBL.1/2"</td> <td>IBY.1/2"</td>	Ø 1/2"	IBS.1/2"	IBL.1/2"	IBY.1/2"
Ø 11/16"         IBS.11/16"         IBL.11/16"         IBY.11/16"           Ø 3/4"         IBS.3/4"         IBL.3/4"         IBY.3/4"           Ø 13/16"         IBS.13/16"         IBL.13/16"         IBY.13/16"           Ø 7/8"         IBS.7/8"         IBL.7/8"         IBY.15/16"           Ø 15/16"         IBS.15/16"         IBL.15/16"         IBY.15/16"           Ø 1"         IBS.1"         IBL.1"         IBY.1"           Ø 1 1/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-1/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-5/16"         IBL.1-3/8"         IBY.1-3/8"           Ø 1 7/16"         IBS.1-1/2"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-1/16"         IBL.1-3/4"         IBY.1-13/1	Ø 9/16"	IBS.9/16"	IBL.9/16"	IBY.9/16"
Ø 3/4"         IBS.3/4"         IBL.3/4"         IBY.3/4"           Ø 13/16"         IBS.13/16"         IBL.13/16"         IBY.13/16"           Ø 7/8"         IBS.7/8"         IBL.7/8"         IBY.15/16"           Ø 15/16"         IBS.15/16"         IBL.15/16"         IBY.15/16"           Ø 1"         IBS.1"         IBL.1"         IBY.1"           Ø 1 1/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-1/8"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-5/16"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-5/16"         IBL.1-3/8"         IBY.1-5/16"           Ø 1 1/2"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-9/16"         IBL.1-5/8"         IBY.1-9/16"           Ø 1 11/16"         IBS.1-11/16"         IBS.1-13/16"         IBY.1-13/16"           Ø 1 13/4"         IBS.1-13/16"         IBL.1-13/16" <td< td=""><td>Ø 5/8"</td><td>IBS.5/8"</td><td>IBL.5/8"</td><td>IBY.5/8"</td></td<>	Ø 5/8"	IBS.5/8"	IBL.5/8"	IBY.5/8"
Ø 13/16"         IBS.13/16"         IBL.13/16"         IBY.13/16"           Ø 7/8"         IBS.7/8"         IBL.7/8"         IBY.15/16"           Ø 15/16"         IBS.15/16"         IBL.15/16"         IBY.15/16"           Ø 1"         IBS.1"         IBL.1"         IBY.1"           Ø 1 1/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-3/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBY.1-3/8"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-9/16"         IBL.1-1/2"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-13/16"         IBY.1-13/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-13/16"         IBY.1-13/16"           Ø 1 13/16"         IBS.1-17/8"         IBL.1-17/8"	Ø 11/16"	IBS.11/16"	IBL.11/16"	IBY.11/16"
Ø 7/8"         IBS.7/8"         IBL.7/8"         IBY.7/8"           Ø 15/16"         IBS.15/16"         IBL.15/16"         IBY.15/16"           Ø 1"         IBS.1"         IBL.1"         IBY.1"           Ø 1 1/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-3/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-3/16"         IBL.1-5/16"         IBY.1-3/16"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 3/8"         IBS.1-3/8"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-9/16"         IBL.1-15/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-13/4"         IBL.1-13/4"         IBY.1-5/8"           Ø 1 13/4"         IBS.1-13/16"         IBL.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-15/16"         IBL.1-15/16" <td>Ø 3/4"</td> <td>IBS.3/4"</td> <td>IBL.3/4"</td> <td>IBY.3/4"</td>	Ø 3/4"	IBS.3/4"	IBL.3/4"	IBY.3/4"
Ø 15/16"         IBS.15/16"         IBL.15/16"         IBY.15/16"           Ø 1"         IBS.1"         IBL.1"         IBY.1"           Ø 1 1/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-1/8"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBL.1-3/8"         IBY.1-7/16"           Ø 1 7/16"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-9/16"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-15/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-3/4"         IBL.1-13/16"         IBY.1-13/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-15/16"         IBL.1-1	Ø 13/16"	IBS.13/16"	IBL.13/16"	IBY.13/16"
Ø 1"         IBS.1"         IBL.1"         IBY.1"           Ø 1 1/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-1/8"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-1/4"         IBL.1-3/16"         IBY.1-5/16"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBL.1-3/8"         IBY.1-7/16"           Ø 1 7/16"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-7/16"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-5/8"         IBL.1-11/16"         IBY.1-13/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBL.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-15/16"         IBL.1-15/16"         IBY.1-15/16"           Ø 2 1/16"         IBS.2-1/8"         IBL.	Ø 7/8"	IBS.7/8"	IBL.7/8"	IBY.7/8"
Ø 1 1/16"         IBS.1-1/16"         IBL.1-1/16"         IBY.1-1/16"           Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-1/8"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-5/16"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBY.1-3/8"         IBY.1-3/8"           Ø 1 7/16"         IBS.1-7/16"         IBL.1-3/8"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-7/16"         IBL.1-1/2"         IBY.1-7/16"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-9/16"         IBL.1-5/8"         IBY.1-9/16"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-11/16"         IBY.1-13/16"           Ø 1 13/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-13/16"           Ø 1 13/16"         IBS.1-15/16"         IBL.1-17/8"         IBY.1-13/16"           Ø 1 15/16"         IBS.1-15/16"         IBL.1-15/16"         IBY.1-15/16"           Ø 2 1/16"         IBS.2-1/16"         IBL.2"         IBY.2-1/16"           Ø 2 1/16"         IBS.2-1/1	Ø 15/16"	IBS.15/16"	IBL.15/16"	IBY.15/16"
Ø 1 1/8"         IBS.1-1/8"         IBL.1-1/8"         IBY.1-1/8"           Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-1/4"         IBL.1-1/4"         IBY.1-3/16"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBL.1-3/8"         IBY.1-3/8"           Ø 1 7/16"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-1/2"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-11/16"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-13/4"         IBL.1-11/16"         IBY.1-13/16"           Ø 1 13/16"         IBS.1-13/16"         IBY.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-17/8"         IBL.1-17/8"         IBY.1-15/16"           Ø 2 1/16"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-3/16"	Ø 1"	IBS.1"	IBL.1"	IBY.1"
Ø 1 3/16"         IBS.1-3/16"         IBL.1-3/16"         IBY.1-3/16"           Ø 1 1/4"         IBS.1-1/4"         IBL.1-1/4"         IBY.1-3/16"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBL.1-3/8"         IBY.1-3/8"           Ø 1 7/16"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-1/2"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-9/16"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-11/16"         IBL.1-11/16"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBL.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2	Ø 1 1/16"	IBS.1-1/16"	IBL.1-1/16"	IBY.1-1/16"
Ø 1 1/4"         IBS.1-1/4"         IBL.1-1/4"         IBY.1-1/4"           Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBL.1-3/8"         IBY.1-3/8"           Ø 1 7/16"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-1/2"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-11/16"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBL.1-13/16"         IBY.1-3/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-7/8"         IBY.1-15/16"           Ø 2 1/16"         IBS.2-1/6"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-1/4"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 1/8"	IBS.1-1/8"	IBL.1-1/8"	IBY.1-1/8"
Ø 1 5/16"         IBS.1-5/16"         IBL.1-5/16"         IBY.1-5/16"           Ø 1 3/8"         IBS.1-3/8"         IBL.1-3/8"         IBY.1-3/8"           Ø 1 7/16"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-1/2"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-5/8"         IBL.1-15/8"         IBY.1-1/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBL.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 3/16"	IBS.1-3/16"	IBL.1-3/16"	IBY.1-3/16"
Ø 1 3/8"         IBS.1-3/8"         IBL.1-3/8"         IBY.1-3/8"           Ø 1 7/16"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-1/2"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-11/16"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBY.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-17/8"         IBY.1-7/8"           Ø 1 15/16"         IBS.1-15/16"         IBY.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 1/4"	IBS.1-1/4"	IBL.1-1/4"	IBY.1-1/4"
Ø 1 7/16"         IBS.1-7/16"         IBL.1-7/16"         IBY.1-7/16"           Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-1/2"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-11/16"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBY.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-17/8"         IBY.1-7/8"           Ø 1 15/16"         IBS.1-15/16"         IBY.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-3/16"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 5/16"	IBS.1-5/16"	IBL.1-5/16"	IBY.1-5/16"
Ø 1 1/2"         IBS.1-1/2"         IBL.1-1/2"         IBY.1-1/2"           Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-11/16"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBY.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-7/8"         IBY.1-7/8"           Ø 1 15/16"         IBS.1-15/16"         IBL.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-3/16"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-1/4"	Ø 1 3/8"	IBS.1-3/8"	IBL.1-3/8"	IBY.1-3/8"
Ø 1 9/16"         IBS.1-9/16"         IBL.1-9/16"         IBY.1-9/16"           Ø 1 5/8"         IBS.1-5/8"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-11/16"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBY.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-7/8"         IBY.1-7/8"           Ø 1 15/16"         IBS.1-15/16"         IBY.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 7/16"	IBS.1-7/16"	IBL.1-7/16"	IBY.1-7/16"
Ø 1 5/8"         IBS.1-5/8"         IBL.1-5/8"         IBY.1-5/8"           Ø 1 11/16"         IBS.1-11/16"         IBY.1-11/16"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBY.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-7/8"         IBY.1-7/8"           Ø 1 15/16"         IBS.1-15/16"         IBY.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBY.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 1/2"	IBS.1-1/2"	IBL.1-1/2"	IBY.1-1/2"
Ø 1 11/16"         IBS.1-11/16"         IBL.1-11/16"         IBY.1-11/16"           Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBY.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-7/8"         IBY.1-7/8"           Ø 1 15/16"         IBS.1-15/16"         IBY.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 9/16"	IBS.1-9/16"	IBL.1-9/16"	IBY.1-9/16"
Ø 1 3/4"         IBS.1-3/4"         IBL.1-3/4"         IBY.1-3/4"           Ø 1 13/16"         IBS.1-13/16"         IBL.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-7/8"         IBY.1-7/8"           Ø 1 15/16"         IBS.1-15/16"         IBY.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 5/8"	IBS.1-5/8"	IBL.1-5/8"	IBY.1-5/8"
Ø 1 13/16"         IBS.1-13/16"         IBL.1-13/16"         IBY.1-13/16"           Ø 1 7/8"         IBS.1-7/8"         IBL.1-7/8"         IBY.1-7/8"           Ø 1 15/16"         IBS.1-15/16"         IBY.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBY.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 11/16"	IBS.1-11/16"	IBL.1-11/16"	IBY.1-11/16"
Ø 1 7/8"         IBS.1-7/8"         IBL.1-7/8"         IBY.1-7/8"           Ø 1 15/16"         IBS.1-15/16"         IBL.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBY.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBY.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 3/4"	IBS.1-3/4"	IBL.1-3/4"	IBY.1-3/4"
Ø 1 15/16"         IBS.1-15/16"         IBL.1-15/16"         IBY.1-15/16"           Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 13/16"	IBS.1-13/16"	IBL.1-13/16"	IBY.1-13/16"
Ø 2"         IBS.2"         IBL.2"         IBY.2"           Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 7/8"	IBS.1-7/8"	IBL.1-7/8"	IBY.1-7/8"
Ø 2 1/16"         IBS.2-1/16"         IBL.2-1/16"         IBY.2-1/16"           Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 1 15/16"	IBS.1-15/16"	IBL.1-15/16"	IBY.1-15/16"
Ø 2 1/8"         IBS.2-1/8"         IBL.2-1/8"         IBY.2-1/8"           Ø 2 3/16"         IBS.2-3/16"         IBL.2-3/16"         IBY.2-3/16"           Ø 2 1/4"         IBS.2-1/4"         IBL.2-1/4"         IBY.2-1/4"	Ø 2"	IBS.2"	IBL.2"	IBY.2"
Ø 2 3/16"     IBS.2-3/16"     IBL.2-3/16"     IBY.2-3/16"       Ø 2 1/4"     IBS.2-1/4"     IBL.2-1/4"     IBY.2-1/4"	Ø 2 1/16"	IBS.2-1/16"	IBL.2-1/16"	IBY.2-1/16"
Ø 2 1/4" IBS.2-1/4" IBL.2-1/4" IBY.2-1/4"	Ø 2 1/8"	IBS.2-1/8"	IBL.2-1/8"	IBY.2-1/8"
	Ø 2 3/16"	IBS.2-3/16"	IBL.2-3/16"	IBY.2-3/16"
Ø 2 5/16"   IBS.2-5/16"   IBL.2-5/16"   IBY.2-5/16"	Ø 2 1/4"	IBS.2-1/4"	IBL.2-1/4"	IBY.2-1/4"
	Ø 2 5/16"	IBS.2-5/16"	IBL.2-5/16"	IBY.2-5/16"

# Annular cutter

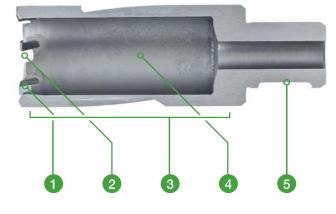
# Tungsten Carbide Tipped

Euroboor TCT (SANDVIK) annular cutters are equipped with a spiral flute which creates optimum chip removal and makes seizure virtually impossible. These annular cutters are used for example in hardened materials such as HARDOX steel, stainless steels and high

tensile strength steel such as railway tracks. Because of the above composition, and when used in a proper way, these cutters are less susceptible to breakage than standard High Speed Steel cutters, especially in larger diameters and lengths.



# TCT profile



6 7 8 9 10

- Extremely hard and durable tungsten carbide cutting teeth (SANDVIK) for the hardest of drilling tasks. Offset positioning for the lowest possible heat development.
- Optimised cutting angles for shortest drilling times and clearest cuts.
- Special alloy body for optimum strength and durability.
- Tapered inside fitment prevents the cutter getting stuck. Guaranteed slug ejection with usage of the correct pilot pin.
- 5. Precise shank fitment for maximum interchangeability
- and close tolerance drilling without run-out.
- Altering "continuous pre-cut" teeth geometry. Generates faster and more stable drilling performance and results in clear cuts of the highest precision and smooth, burr-free finishes. SANDVIK carbide tipped.
- Well-thought-out spiral flute angles for optimal chip removal.
- Specially designed blades for optimum stability and heatreduction.
- Number of flutes and teeth matched to the diameter of the cutter for the best tooth load and superior cutting speeds.
- Precision ground shanks for optimum fitment of the cutter itself in the tool holder and of pilot pin in the annular cutter. Increases safety, stability and accurate hole dimensions.



# тст

Weldon shank



WelNit shank



**Shank sizes**DIA Ø 12 - 60 mm:
19.05 mm (3/4")

DIA Ø 61 - 200 mm: 31.75 mm (1 1/4")



Depth of Cut measured inside cutter

	DoC 35 mm Weldon	DoC 35 mm WelNit	DoC 55 mm Weldon	DoC 55 mm WelNit
DIA	Ø 12 - 100 mm	Ø 12 - 60 mm	Ø 12 - 200 mm	Ø 12 - 60 mm
	Code	Code	Code	Code
Ø 12	HMS.120	HMSU.120	HML.120	HMLU.120
Ø 13	HMS.130	HMSU.130	HML.130	HMLU.130
Ø 14	HMS.140	HMSU.140	HML.140	HMLU.140
Ø 15	HMS.150	HMSU.150	HML.150	HMLU.150
Ø 16	HMS.160	HMSU.160	HML.160	HMLU.160
Ø 17	HMS.170	HMSU.170	HML.170	HMLU.170
Ø 18	HMS.180	HMSU.180	HML.180	HMLU.180
Ø 19	HMS.190	HMSU.190	HML.190	HMLU.190
Ø 20	HMS.200	HMSU.200	HML.200	HMLU.200
Ø 21	HMS.210	HMSU.210	HML.210	HMLU.210
Ø 22	HMS.220	HMSU.220	HML.220	HMLU.220
Ø 23	HMS.230	HMSU.230	HML.230	HMLU.230
Ø 24	HMS.240	HMSU.240	HML.240	HMLU.240
Ø 25	HMS.250	HMSU.250	HML.250	HMLU.250
Ø 26	HMS.260	HMSU.260	HML.260	HMLU.260
Ø 27	HMS.270	HMSU.270	HML.270	HMLU.270
Ø 28	HMS.280	HMSU.280	HML.280	HMLU.280
Ø 29	HMS.290	HMSU.290	HML.290	HMLU.290
Ø 30	HMS.300	HMSU.300	HML.300	HMLU.300
Ø 31	HMS.310	HMSU.310	HML.310	HMLU.310
Ø 32	HMS.320	HMSU.320	HML.320	HMLU.320
Ø 33	HMS.330	HMSU.330	HML.330	HMLU.330
Ø 34	HMS.340	HMSU.340	HML.340	HMLU.340
Ø 35	HMS.350	HMSU.350	HML.350	HMLU.350
Ø 36	HMS.360	HMSU.360	HML.360	HMLU.360
Ø 37	HMS.370	HMSU.370	HML.370	HMLU.370
Ø 38	HMS.380	HMSU.380	HML.380	HMLU.380
Ø 39	HMS.390	HMSU.390	HML.390	HMLU.390
Ø 40	HMS.400	HMSU.400	HML.400	HMLU.400
Ø 41	HMS.410	HMSU.410	HML.410	HMLU.410
Ø 42	HMS.420	HMSU.420	HML.420	HMLU.420
Ø 43	HMS.430	HMSU.430	HML.430	HMLU.430
Ø 44	HMS.440	HMSU.440	HML.440	HMLU.440
Ø 45	HMS.450	HMSU.450	HML.450	HMLU.450
Ø 46	HMS.460	HMSU.460	HML.460	HMLU.460
Ø 47	HMS.470	HMSU.470	HML.470	HMLU.470
Ø 48	HMS.480	HMSU.480	HML.480	HMLU.480
Ø 49	HMS.490	HMSU.490	HML.490	HMLU.490
Ø 50	HMS.500	HMSU.500	HML.500	HMLU.500
Ø 51	HMS.510	HMSU.510	HML.510	HMLU.510
Ø 52	HMS.520	HMSU.520	HML.520	HMLU.520
Ø 53	HMS.530	HMSU.530	HML.530	HMLU.530
Ø 54	HMS.540	HMSU.540	HML.540	HMLU.540
Ø 55	HMS.550	HMSU.550	HML.550	HMLU.550
Ø 56	HMS.560	HMSU.560	HML.560	HMLU.560
Ø 57	HMS.570	HMSU.570	HML.570	HMLU.570
Ø 58	HMS.580	HMSU.580	HML.580	HMLU.580
Ø 59	HMS.590	HMSU.590	HML.590	HMLU.590
Ø 60	HMS.600	HMSU.600	HML.600	HMLU.600
Ø 61	HMS.610		HML.610	
Ø 62	HMS.620		HML.620	
× 02	1 11VIO.020		I IIVIL.UZU	

	DoC 35 mm Weldon	DoC 35 mm WelNit	DoC 55 mm Weldon	DoC 55 mm WelNit
DIA	Ø 12 - 100 mm	Ø 12 - 60 mm	Ø 12 - 200 mm	Ø 12 - 60 mm
	Code	Code	Code	Code
Ø 63	HMS.630		HML.630	
Ø 64	HMS.640		HML.640	
Ø 65	HMS.650		HML.650	
Ø 66	HMS.660		HML.660	
Ø 67	HMS.670		HML.670	
Ø 68	HMS.680		HML.680	
Ø 69	HMS.690		HML.690	
Ø 70	HMS.700		HML.700	
Ø 71	HMS.710		HML.710	
Ø 72	HMS.720		HML.720	
Ø 73	HMS.730		HML.730	
Ø 74	HMS.740		HML.740	
Ø 75	HMS.750		HML.750	
Ø 76	HMS.760		HML.760	
Ø 77	HMS.770		HML.770	
Ø 78	HMS.780		HML.780	
Ø 79	HMS.790		HML.790	
Ø 80	HMS.800		HML.800	
Ø 81	HMS.810		HML.810	
Ø 82	HMS.820		HML.820	
Ø 83	HMS.830		HML.830	
Ø 84	HMS.840		HML.840	
Ø 85	HMS.850		HML.850	
Ø 86	HMS.860		HML.860	
Ø 87	HMS.870		HML.870	
Ø 88	HMS.880		HML.880	
Ø 89	HMS.890		HML.890	
Ø 90	HMS.900		HML.900	
Ø 91	HMS.910		HML.910	
Ø 92	HMS.920		HML.920	
Ø 93	HMS.930		HML.930	
Ø 94	HMS.940		HML.940	
Ø 95	HMS.950		HML.950	
Ø 96	HMS.960		HML.960	
Ø 97	HMS.970		HML.970	
Ø 98	HMS.980		HML.980	
Ø 99	HMS.990		HML.990	
Ø 100	HMS.1000		HML.1000	
Ø 101			HML.1010	
Ø 102			HML.1020	
Ø 103			HML.1030	
Ø 104			HML.1040	
Ø 105			HML.1050	
Ø 106			HML.1060	
Ø 107			HML.1070	
Ø 108			HML.1080	
Ø 109			HML.1090	
Ø 110			HML.1100	
Ø 111			HML.1110	
Ø 112			HML.1120	
Ø 113			HML.1130	



Weldon shank



WelNit shank



# Shank sizes

DIA Ø 12 - 60 mm: 19.05 mm (3/4")



Depth of Cut measured inside cutter



Weldon shank



WelNit shank



Shank sizes
DIA Ø 12 - 60 mm:

19.05 mm (3/4")



Depth of Cut measured inside cutter

	DoC 35 mm Weldon	DoC 35 mm WelNit	DoC 55 mm Weldon	DoC 55 mm WelNit
DIA	Ø 12 - 100 mm	Ø 12 - 60 mm	Ø 12 - 200 mm	Ø 12 - 60 mm
	Code	Code	Code	Code
Ø 114			HML.1140	
Ø 115			HML.1150	
Ø 116			HML.1160	
Ø 117			HML.1170	
Ø 118			HML.1180	
Ø 119			HML.1190	
Ø 120			HML.1200	
Ø 121			HML.1210	
Ø 122			HML.1220	
Ø 123			HML.1230	
Ø 124			HML.1240	
Ø 125			HML.1250	
Ø 126			HML.1260	
Ø 127			HML.1270	
Ø 128			HML.1280	
Ø 129			HML.1290	
Ø 130			HML.1300	
Ø 131			HML.1310	
Ø 132			HML.1320	
Ø 133			HML.1330	
Ø 134			HML.1340	
Ø 135			HML.1350	
Ø 136			HML.1360	
Ø 137			HML.1370	
Ø 137			HML.1380	
Ø 139			HML.1390	
			HML.1400	
Ø 140 Ø 141				
			HML.1410	
Ø 142			HML.1420	
Ø 143			HML.1430	
Ø 144			HML.1440	
Ø 145			HML.1450	
Ø 146			HML.1460	
Ø 147			HML.1470	
Ø 148			HML.1480	
Ø 149			HML.1490	
Ø 150			HML.1500	
Ø 151			HML.1510	
Ø 152			HML.1520	
Ø 153			HML.1530	
Ø 154			HML.1540	
Ø 155			HML.1550	
Ø 156			HML.1560	
Ø 157			HML.1570	
Ø 158			HML.1580	
Ø 159			HML.1590	
Ø 160			HML.1600	
Ø 161			HML.1610	
Ø 162			HML.1620	
Ø 163			HML.1630	
Ø 164			HML.1640	

	DoC 35 mm Weldon	DoC 35 mm WelNit	DoC 55 mm Weldon	DoC 55 mm WelNit
DIA	Ø 12 - 100 mm	Ø 12 - 60 mm	Ø 12 - 200 mm	Ø 12 - 60 mm
	Code	Code	Code	Code
Ø 165			HML.1650	
Ø 166			HML.1660	
Ø 167			HML.1670	
Ø 168			HML.1680	
Ø 169			HML.1690	
Ø 170			HML.1700	
Ø 171			HML.1710	
Ø 172			HML.1720	
Ø 173			HML.1730	
Ø 174			HML.1740	
Ø 175			HML.1750	
Ø 176			HML.1760	
Ø 177			HML.1770	
Ø 178			HML.1780	
Ø 179			HML.1790	
Ø 180			HML.1800	
Ø 181			HML.1810	
Ø 182			HML.1820	
Ø 183			HML.1830	
Ø 184			HML.1840	
Ø 185			HML.1850	
Ø 186			HML.1860	
Ø 187			HML.1870	
Ø 188			HML.1880	
Ø 189			HML.1890	
Ø 190			HML.1900	
Ø 191			HML.1910	
Ø 192			HML.1920	
Ø 193			HML.1930	
Ø 194			HML.1940	
Ø 195			HML.1950	
Ø 196			HML.1960	
Ø 197			HML.1970	
Ø 198			HML.1980	
Ø 199			HML.1990	
Ø 200			HML.2000	



Weldon shank



WelNit shank



# Shank sizes

DIA Ø 12 - 60 mm: 19.05 mm (3/4")



DoC Depth of Cut measured inside cutter

# TCT

Weldon shank



**Shank sizes**DIA Ø 12 - 60 mm:
19.05 mm (3/4")

DIA Ø 61 - 200 mm: 31.75 mm (1 1/4")



DoC Depth of Cut measured inside cutter

	DoC 75 mm Weldon	DoC 100 mm Weldon	DoC 150 mm Weldon	DoC 200 mm Weldon
DIA	Ø 12 - 50 mm	Ø 12 - 200 mm	Ø 22 - 200 mm	Ø 22 - 200 mm
	Code	Code	Code	Code
Ø 12	HMY.120	HMX.120		
Ø 13	HMY.130	HMX.130		
Ø 14	HMY.140	HMX.140		
Ø 15	HMY.150	HMX.150		
Ø 16	HMY.160	HMX.160		
Ø 17	HMY.170	HMX.170		
Ø 18	HMY.180	HMX.180		
Ø 19	HMY.190	HMX.190		
Ø 20	HMY.200	HMX.200		
Ø 21	HMY.210	HMX.210		
Ø 22	HMY.220	HMX.220	HMW.220	HMV.220
Ø 23	HMY.230	HMX.230	HMW.230	HMV.230
Ø 24	HMY.240	HMX.240	HMW.240	HMV.240
Ø 25	HMY.250	HMX.250	HMW.250	HMV.250
Ø 26	HMY.260	HMX.260	HMW.260	HMV.260
Ø 27	HMY.270	HMX.270	HMW.270	HMV.270
Ø 28	HMY.280	HMX.280	HMW.280	HMV.280
Ø 29	HMY.290	HMX.290	HMW.290	HMV.290
Ø 30	HMY.300	HMX.300	HMW.300	HMV.300
Ø 31	HMY.310	HMX.310	HMW.310	HMV.310
Ø 32	HMY.320	HMX.320	HMW.320	HMV.320
Ø 33	HMY.330	HMX.330	HMW.330	HMV.330
Ø 34	HMY.340	HMX.340	HMW.340	HMV.340
Ø 35	HMY.350	HMX.350	HMW.350	HMV.350
Ø 36	HMY.360	HMX.360	HMW.360	HMV.360
Ø 37	HMY.370	HMX.370	HMW.370	HMV.370
Ø 38	HMY.380	HMX.380	HMW.380	HMV.380
Ø 39	HMY.390	HMX.390	HMW.390	HMV.390
Ø 40	HMY.400	HMX.400	HMW.400	HMV.400
Ø 41	HMY.410	HMX.410	HMW.410	HMV.410
Ø 42	HMY.420	HMX.420	HMW.420	HMV.420
Ø 43	HMY.430	HMX.430	HMW.430	HMV.430
Ø 44	HMY.440	HMX.440	HMW.440	HMV.440
Ø 45	HMY.450	HMX.450	HMW.450	HMV.450
Ø 46	HMY.460	HMX.460	HMW.460	HMV.460
Ø 47	HMY.470	HMX.470	HMW.470	HMV.470
Ø 48	HMY.480	HMX.480	HMW.480	HMV.480
Ø 49	HMY.490	HMX.490	HMW.490	HMV.490
Ø 50	HMY.500	HMX.500	HMW.500	HMV.500
Ø 51		HMX.510	HMW.510	HMV.510
Ø 52		HMX.520	HMW.520	HMV.520
Ø 53		HMX.530	HMW.530	HMV.530
Ø 54		HMX.540	HMW.540	HMV.540
Ø 55		HMX.550	HMW.550	HMV.550
Ø 56		HMX.560	HMW.560	HMV.560
Ø 57		HMX.570	HMW.570	HMV.570
Ø 58		HMX.580	HMW.580	HMV.580
Ø 59		HMX.590	HMW.590	HMV.590
Ø 60		HMX.600	HMW.600	HMV.600
Ø 61		HMX.610	HMW.610	HMV.610
Ø 62		HMX.620	HMW.620	HMV.620

	DoC 75 mm Weldon	DoC 100 mm Weldon	DoC 150 mm Weldon	DoC 200 mm Weldon
DIA	Ø 12 - 50 mm	Ø 12 - 200 mm	Ø 22 - 200 mm	Ø 22 - 200 mm
	Code	Code	Code	Code
Ø 63		HMX.630	HMW.630	HMV.630
Ø 64		HMX.640	HMW.640	HMV.640
Ø 65		HMX.650	HMW.650	HMV.650
Ø 66		HMX.660	HMW.660	HMV.660
Ø 67		HMX.670	HMW.670	HMV.670
Ø 68		HMX.680	HMW.680	HMV.680
Ø 69		HMX.690	HMW.690	HMV.690
Ø 70		HMX.700	HMW.700	HMV.700
Ø 71		HMX.710	HMW.710	HMV.710
Ø 72		HMX.720	HMW.720	HMV.720
Ø 73		HMX.730	HMW.730	HMV.730
Ø 74		HMX.740	HMW.740	HMV.740
Ø 75		HMX.750	HMW.750	HMV.750
Ø 76		HMX.760	HMW.760	HMV.760
Ø 77		HMX.770	HMW.770	HMV.770
Ø 78		HMX.780	HMW.780	HMV.780
Ø 79		HMX.790	HMW.790	HMV.790
Ø 80		HMX.800	HMW.800	HMV.800
Ø 81				
		HMX.810	HMW.810	HMV.810
Ø 82		HMX.820	HMW.820	HMV.820
Ø 83		HMX.830	HMW.830	HMV.830
Ø 84		HMX.840	HMW.840	HMV.840
Ø 85		HMX.850	HMW.850	HMV.850
Ø 86		HMX.860	HMW.860	HMV.860
Ø 87		HMX.870	HMW.870	HMV.870
Ø 88		HMX.880	HMW.880	HMV.880
Ø 89		HMX.890	HMW.890	HMV.890
Ø 90		HMX.900	HMW.900	HMV.900
Ø 91		HMX.910	HMW.910	HMV.910
Ø 92		HMX.920	HMW.920	HMV.920
Ø 93		HMX.930	HMW.930	HMV.930
Ø 94		HMX.940	HMW.940	HMV.940
Ø 95		HMX.950	HMW.950	HMV.950
Ø 96		HMX.960	HMW.960	HMV.960
Ø 97		HMX.970	HMW.970	HMV.970
Ø 98		HMX.980	HMW.980	HMV.980
Ø 99		HMX.990	HMW.990	HMV.990
Ø 100		HMX.1000	HMW.1000	HMV.1000
Ø 101		HMX.1010	HMW.1010	HMV.1010
Ø 102		HMX.1020	HMW.1020	HMV.1020
Ø 103		HMX.1030	HMW.1030	HMV.1030
Ø 104		HMX.1040	HMW.1040	HMV.1040
Ø 105		HMX.1050	HMW.1050	HMV.1050
Ø 106		HMX.1060	HMW.1060	HMV.1060
Ø 107		HMX.1070	HMW.1070	HMV.1070
Ø 108		HMX.1080	HMW.1080	HMV.1080
Ø 109		HMX.1090	HMW.1090	HMV.1090
Ø 110		HMX.1100	HMW.1100	HMV.1100
Ø 111		HMX.1110	HMW1110	HMV.1110
Ø 112		HMX.1120	HMW1120	HMV.1110
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Weldon shank



Shank sizes

DIA Ø 12 - 60 mm: 19.05 mm (3/4")



DoC Depth of Cut measured inside cutter

# тст

Weldon shank



**Shank sizes**DIA Ø 12 - 60 mm:
19.05 mm (3/4")

DIA Ø 61 - 200 mm: 31.75 mm (1 1/4")



DoC Depth of Cut measured inside cutter

	DoC 75 mm Weldon	DoC 100 mm Weldon	DoC 150 mm Weldon	DoC 200 mm Weldon
DIA	Ø 12 - 50 mm	Ø 12 - 200 mm	Ø 22 - 200 mm	Ø 22 - 200 mm
	Code	Code	Code	Code
Ø 114		HMX.1140	HMW.1140	HMV.1140
Ø 115		HMX.1150	HMW.1150	HMV.1150
Ø 116		HMX.1160	HMW.1160	HMV.1160
Ø 117		HMX.1170	HMW.1170	HMV.1170
Ø 118		HMX.1180	HMW.1180	HMV.1180
Ø 119		HMX.1190	HMW.1190	HMV.1190
Ø 120		HMX.1200	HMW.1200	HMV.1200
Ø 121		HMX.1210	HMW.1210	HMV.1210
Ø 122		HMX.1220	HMW.1220	HMV.1220
Ø 123		HMX.1230	HMW.1230	HMV.1230
Ø 124		HMX.1240	HMW.1240	HMV.1240
Ø 125		HMX.1250	HMW.1250	HMV.1250
Ø 126		HMX.1260	HMW.1260	HMV.1260
Ø 127		HMX.1270	HMW.1270	HMV.1270
Ø 128		HMX.1280	HMW.1280	HMV.1280
Ø 129		HMX.1290	HMW.1290	HMV.1290
Ø 130		HMX.1300	HMW.1300	HMV.1300
Ø 131		HMX.1310	HMW.1310	HMV.1310
Ø 132		HMX.1320	HMW.1320	HMV.1320
Ø 133		HMX.1330	HMW.1330	HMV.1330
Ø 133		HMX.1340	HMW.1340	HMV.1340
Ø 135		HMX.1350	HMW.1350	HMV.1350
Ø 136		HMX.1360	HMW.1360	HMV.1360
Ø 137		HMX.1370	HMW.1370	HMV.1370
Ø 138		HMX.1380	HMW.1380	HMV.1380
Ø 139		HMX.1390	HMW.1390	HMV.1390
Ø 140		HMX.1400	HMW.1400	HMV.1400
Ø 141		HMX.1410	HMW.1410	HMV.1410
Ø 142		HMX.1420	HMW.1420	HMV.1420
Ø 143		HMX.1430	HMW.1430	HMV.1430
Ø 144		HMX.1440	HMW.1440	HMV.1440
Ø 145		HMX.1450	HMW.1450	HMV.1450
Ø 146		HMX.1460	HMW.1460	HMV.1460
Ø 147		HMX.1470	HMW.1470	HMV.1470
Ø 148		HMX.1480	HMW.1480	HMV.1480
Ø 149		HMX.1490	HMW.1490	HMV.1490
Ø 150		HMX.1500	HMW.1500	HMV.1500
Ø 151		HMX.1510	HMW.1510	HMV.1510
Ø 152		HMX.1520	HMW.1520	HMV.1520
Ø 153		HMX.1530	HMW.1530	HMV.1530
Ø 154		HMX.1540	HMW.1540	HMV.1540
Ø 155		HMX.1550	HMW.1550	HMV.1550
Ø 156		HMX.1560	HMW.1560	HMV.1560
Ø 157		HMX.1570	HMW.1570	HMV.1570
Ø 158		HMX.1580	HMW.1580	HMV.1580
Ø 159		HMX.1590	HMW.1590	HMV.1590
Ø 160		HMX.1600	HMW.1600	HMV.1600
Ø 161		HMX.1610	HMW.1610	HMV.1610
Ø 162		HMX.1620	HMW.1620	HMV.1620
Ø 163		HMX.1630	HMW.1630	HMV.1630
			HMW.1640	

	DoC 75 mm Weldon	DoC 100 mm Weldon	DoC 150 mm Weldon	DoC 200 mm Weldon
DIA	Ø 12 - 50 mm	Ø 12 - 200 mm	Ø 22 - 200 mm	Ø 22 - 200 mm
	Code	Code	Code	Code
Ø 165		HMX.1650	HMW.1650	HMV.1650
Ø 166		HMX.1660	HMW.1660	HMV.1660
Ø 167		HMX.1670	HMW.1670	HMV.1670
Ø 168		HMX.1680	HMW.1680	HMV.1680
Ø 169		HMX.1690	HMW.1690	HMV.1690
Ø 170		HMX.1700	HMW.1700	HMV.1700
Ø 171		HMX.1710	HMW.1710	HMV.1710
Ø 172		HMX.1720	HMW.1720	HMV.1720
Ø 173		HMX.1730	HMW.1730	HMV.1730
Ø 174		HMX.1740	HMW.1740	HMV.1740
Ø 175		HMX.1750	HMW.1750	HMV.1750
Ø 176		HMX.1760	HMW.1760	HMV.1760
Ø 177		HMX.1770	HMW.1770	HMV.1770
Ø 178		HMX.1780	HMW1780	HMV.1780
Ø 179		HMX.1790	HMW.1790	HMV.1790
Ø 180		HMX.1800	HMW.1800	HMV.1800
Ø 181		HMX.1810	HMW.1810	HMV.1810
Ø 182		HMX.1820	HMW.1820	HMV.1820
Ø 183		HMX.1830	HMW.1830	HMV.1830
Ø 184		HMX.1840	HMW.1840	HMV.1840
Ø 185		HMX.1850	HMW.1850	HMV.1850
Ø 186		HMX.1860	HMW.1860	HMV.1860
Ø 187		HMX.1870	HMW.1870	HMV.1870
Ø 188		HMX.1880	HMW.1880	HMV.1880
Ø 189		HMX.1890	HMW.1890	HMV.1890
Ø 190		HMX.1900	HMW.1900	HMV.1900
Ø 191		HMX.1910	HMW.1910	HMV.1910
Ø 192		HMX.1920	HMW.1920	HMV.1920
Ø 193		HMX.1930	HMW.1930	HMV.1930
Ø 194		HMX.1940	HMW.1940	HMV.1940
Ø 195		HMX.1950	HMW.1950	HMV.1950
Ø 196		HMX.1960	HMW.1960	HMV.1960
Ø 197		HMX.1970	HMW.1970	HMV.1970
Ø 198		HMX.1980	HMW.1980	HMV.1980
Ø 199		HMX.1990	HMW.1990	HMV.1990
Ø 200		HMX.2000	HMW.2000	HMV.2000



Weldon shank



Shank sizes

DIA Ø 12 - 60 mm: 19.05 mm (3/4")

DIA Ø 61 - 200 mm: 31.75 mm (1 1/4")



Depth of Cut measured inside cutter

91

# TCT

Weldon shank



WelNit shank



**Shank sizes**DIA Ø 7/16" - 2 5/16":

DIA Ø 2 3/8" - 8": 1 1/4"



Depth of Cut measured inside cutter

	DoC 1" Weldon	DoC 1" WelNit	DoC 2" Weldon	DoC 2" WelNit
DIA	Ø 7/16" - 4"	Ø 7/16" - 2 5/16"	Ø 7/16" - 8"	Ø 7/16" - 2 5/16"
	Code	Code	Code	Code
Ø 7/16"	HMS.7/16"	HMSU.7/16"	HML.7/16"	HMLU.7/16"
Ø 1/2"	HMS.1/2"	HMSU.1/2"	HML.1/2"	HMLU.1/2"
Ø 9/16"	HMS.9/16"	HMSU.9/16"	HML.9/16"	HMLU.9/16"
Ø 5/8"	HMS.5/8"	HMSU.5/8"	HML.5/8"	HMLU.5/8"
Ø 11/16"	HMS.11/16"	HMSU.11/16"	HML.11/16"	HMLU.11/16"
Ø 3/4"	HMS.3/4"	HMSU.3/4"	HML.3/4"	HMLU.3/4"
Ø 13/16"	HMS.13/16"	HMSU.13/16"	HML.13/16"	HMLU.13/16"
Ø 7/8"	HMS.7/8"	HMSU.7/8"	HML.7/8"	HMLU.7/8"
Ø 15/16"	HMS.15/16"	HMSU.15/16"	HML.15/16"	HMLU.15/16"
Ø 1"	HMS.1"	HMSU.1"	HML.1"	HMLU.1"
Ø 1 1/16"	HMS.1-1/16"	HMSU.1-1/16"	HML.1-1/16"	HMLU.1-1/16"
Ø 1 1/8"	HMS.1-1/8"	HMSU.1-1/8"	HML.1-1/8"	HMLU.1-1/8"
Ø 1 3/16"	HMS.1-3/16"	HMSU.1-3/16"	HML.1-3/16"	HMLU.1-3/16"
Ø 1 1/4"	HMS.1-1/4"	HMSU.1-1/4"	HML.1-1/4"	HMLU.1-1/4"
Ø 1 5/16"	HMS.1-5/16"	HMSU.1-5/16"	HML.1-5/16"	HMLU.1-5/16"
Ø 1 3/8"	HMS.1-3/8"	HMSU.1-3/8"	HML.1-3/8"	HMLU.1-3/8"
Ø 1 7/16"	HMS.1-7/16"	HMSU.1-7/16"	HML.1-7/16"	HMLU.1-7/16"
Ø 1 1/2"	HMS.1-1/2"	HMSU.1-1/2"	HML.1-1/2"	HMLU.1-1/2"
Ø 1 9/16"	HMS.1-9/16"	HMSU.1-9/16"	HML.1-9/16"	HMLU.1-9/16"
Ø 1 5/8"	HMS.1-5/8"	HMSU.1-5/8"	HML.1-5/8"	HMLU.1-5/8"
Ø 1 11/16"	HMS.1-11/16"	HMSU.1-11/16"	HML.1-11/16"	HMLU.1-11/16"
Ø 1 3/4"	HMS.1-3/4"	HMSU.1-3/4"	HML.1-3/4"	HMLU.1-3/4"
Ø 1 13/16"	HMS.1-13/16"	HMSU.1-13/16"	HML.1-13/16"	HMLU.1-13/16"
Ø 1 7/8"	HMS.1-7/8"	HMSU.1-7/8"	HML.1-7/8"	HMLU.1-7/8"
Ø 1 15/16"	HMS.1-15/16"	HMSU.1-15/16"	HML.1-15/16"	HMLU.1-15/16"
Ø 2"	HMS.2"	HMSU.2"	HML.2"	HMLU.2"
Ø 2 1/16"	HMS.2-1/16"	HMSU.2-1/16"	HML.2-1/16"	HMLU.2-1/16"
Ø 2 1/8"	HMS.2-1/8"	HMSU.2-1/8"	HML.2-1/8"	HMLU.2-1/8"
Ø 2 3/16"	HMS.2-3/16"	HMSU.2-3/16"	HML.2-3/16"	HMLU.2-3/16"
Ø 2 1/4"	HMS.2-1/4"	HMSU.2-1/4"	HML.2-1/4"	HMLU.2-1/4"
Ø 2 5/16"	HMS. 2-5/16"	HMSU. 2-5/16"	HML.2-5/16"	HMLU . 2-5/16"
Ø 2 3/8"	HMS.2-3/8"		HML.2-3/8"	
Ø 2 7/16"	HMS.2-7/16"		HML.2-7/16"	
Ø 2 1/2"	HMS.2-1/2"		HML.2-1/2"	
Ø 2 9/16"	HMS.2-9/16"		HML.2-9/16"	
Ø 2 5/8"	HMS.2-5/8"		HML.2-5/8"	
Ø 2 11/16"	HMS.2-11/16"		HML.2-11/16"	
Ø 2 3/4"	HMS.2-3/4"		HML.2-3/4"	
Ø 2 13/16"	HMS.2-13/16"		HML.2-13/16"	
Ø 2 7/8"	HMS.2-7/8"		HML.2-7/8"	
Ø 2 15/16"	HMS.2-15/16"		HML.2-15/16"	
Ø 3"	HMS.3"		HML.3"	
Ø 3 1/16"	HMS.3-1/16"		HML.3-1/16"	
Ø 3 1/8"	HMS.3-1/8"		HML.3-1/8"	
Ø 3 3/16"	HMS.3-3/16"		HML.3-3/16"	
Ø 3 1/4"	HMS.3-1/4"		HML.3-1/4"	
Ø 3 5/16"	HMS.3-5/16"		HML.3-5/16"	
Ø 3 3/8"	HMS.3-3/8"		HML.3-3/8"	
Ø 3 7/16"	HMS.3-7/16"		HML.3-7/16"	
Ø 3 1/2"	HMS.3-1/2"		HML.3-1/2"	
Ø 3 9/16"	HMS.3-9/16"		HML.3-9/16"	

	DoC 1" Weldon	DoC 1" WelNit	DoC 2" Weldon	DoC 2" WelNit
DIA	Ø 7/16" - 4"	Ø 7/16" - 2 5/16"	Ø 7/16" - 8"	Ø 7/16" - 2 5/16"
	Code	Code	Code	Code
Ø 3 5/8"	HMS.3-5/8"		HML.3-5/8"	
Ø 3 11/16"	HMS.3-11/16"		HML.3-11/16"	
Ø 3 3/4"	HMS.3-3/4"		HML.3-3/4"	
Ø 3 13/16"	HMS.3-13/16"		HML.3-13/16"	
Ø 3 7/8"	HMS.3-7/8"		HML.3-7/8"	
Ø 3 15/16"	HMS.3-15/16"		HML.3-15/16"	
Ø 4"	HMS.4"		HML.4"	
Ø 4 1/16"			HML.4-1/16"	
Ø 4 1/8"			HML.4-1/8"	
Ø 4 3/16"			HML.4-3/16"	
Ø 4 1/4"			HML.4-1/4"	
Ø 4 5/16"			HML.4-5/16"	
Ø 4 3/8"			HML.4-3/8"	
Ø 4 7/16"			HML.4-7/16"	
Ø 4 1/2"			HML.4-1/2"	
Ø 4 9/16"			HML.4-9/16"	
Ø 4 5/8"			HML.4-5/8"	
Ø 4 11/16"			HML.4-11/16"	
Ø 4 3/4"			HML.4-3/4"	
Ø 4 13/16"			HML.4-13/16"	
Ø 4 7/8"			HML.4-7/8"	
Ø 4 15/16"			HML.4-15/16"	
Ø 5"			HML.5"	
Ø 5 1/16"			HML.5-1/16"	
Ø 5 1/8"			HML.5-1/8"	
Ø 5 3/16"			HML.5-3/16"	
Ø 5 1/4"			HML.5-1/4"	
Ø 5 5/16"			HML.5-5/16"	
Ø 5 3/8"			HML.5-3/8"	
Ø 5 7/16"			HML.5-7/16"	
Ø 5 1/2"			HML.5-1/2"	
Ø 5 9/16"			HML.5-9/16"	
Ø 5 5/8"			HML.5-5/8"	
Ø 5 11/16"			HML.5-11/16"	
Ø 5 3/4"			HML.5-3/4"	
Ø 5 13/16"			HML.5-13/16"	
Ø 5 7/8"			HML.5-7/8"	
Ø 5 15/16"			HML.5-15/16"	
Ø 6"			HML.6"	
Ø 6 1/16"			HML.6-1/16"	
Ø 6 1/8"			HML.6-1/8"	
Ø 6 3/16"			HML.6-3/16"	
Ø 6 1/4"			HML.6-1/4"	
Ø 6 5/16"			HML.6-5/16"	
Ø 6 3/8"			HML.6-3/8"	
Ø 6 7/16"				
			HML.6-7/16"	
Ø 6 1/2"			HML.6-1/2"	
Ø 6 9/16"			HML.6-9/16"	
Ø 6 5/8"			HML.6-5/8"	
Ø 6 11/16"			HML.6-11/16"	
Ø 6 3/4"			HML.6-3/4"	



Weldon shank



WelNit shank



### Shank sizes

DIA Ø 7/16" - 2 3/8": 3/4"



### тст

Weldon shank



WelNit shank



**Shank sizes**DIA Ø 7/16" - 2 3/8":
3/4"



DoC

Depth
of Cut
measured
inside
cutter

	DoC 1" Weldon	DoC 1" WelNit	DoC 2" Weldon	DoC 2" WelNit
DIA	Ø 7/16" - 4"	Ø 7/16" - 2 5/16"	Ø 7/16" - 8"	Ø 7/16" - 2 5/16"
	Code	Code	Code	Code
Ø 6 13/16"			HML.6-13/16"	
Ø 6 7/8"			HML.6-7/8"	
Ø 6 15/16"			HML.6-15/16"	
Ø 7"			HML.7"	
Ø 7 1/16"			HML.7-1/16"	
Ø 7 1/8"			HML.7-1/8"	
Ø 7 3/16"			HML.7-3/16"	
Ø 7 1/4"			HML.7-1/4"	
Ø 7 5/16"			HML.7-5/16"	
Ø 7 3/8"			HML.7-3/8"	
Ø 7 7/16"			HML.7-7/16"	
Ø 7 1/2"			HML.7-1/2"	
Ø 7 9/16"			HML.7-9/16"	
Ø 7 5/8"			HML.7-5/8"	
Ø 7 11/16"			HML.7-11/16"	
Ø 7 3/4"			HML.7-3/4"	
Ø 7 13/16"			HML.7-13/16"	
Ø 7 7/8"			HML.7-7/8"	
Ø 7 15/16"			HML.7-15/16"	
Ø 8"			HML.8"	

	DoC 3" Weldon	DoC 4" Weldon	DoC 6" Weldon	DoC 8" Weldon
DIA	Ø 7/16" - 3"	Ø 7/16" - 8"	Ø 7/8" - 8"	Ø 7/8" - 8"
	Code	Code	Code	Code
Ø 7/16"	HMY.7/16"	HMX.7/16"		
Ø 1/2"	HMY.1/2"	HMX.1/2"		
Ø 9/16"	HMY.9/16"	HMX.9/16"		
Ø 5/8"	HMY.5/8"	HMX.5/8"		
Ø 11/16"	HMY.11/16"	HMX.11/16"		
Ø 3/4"	HMY.3/4"	HMX.3/4"		
Ø 13/16"	HMY.13/16"	HMX.13/16"		
Ø 7/8"	HMY.7/8"	HMX.7/8"	HMW.7/8"	HMV.7/8"
Ø 15/16"	HMY.15/16"	HMX.15/16"	HMW.15/16"	HMV.15/16"
Ø 1"	HMY.1"	HMX.1"	HMW.1"	HMV.1"
Ø 1 1/16"	HMY.1-1/16"	HMX.1-1/16"	HMW.1-1/16"	HMV.1-1/16"
Ø 1 1/8"	HMY.1-1/8"	HMX.1-1/8"	HMW.1-1/8"	HMV.1-1/8"
Ø 1 3/16"	HMY.1-3/16"	HMX.1-3/16"	HMW.1-3/16"	HMV.1-3/16"
Ø 1 1/4"	HMY.1-1/4"	HMX.1-1/4"	HMW.1-1/4"	HMV.1-1/4"
Ø 1 5/16"	HMY.1-5/16"	HMX.1-5/16"	HMW.1-5/16"	HMV.1-5/16"
Ø 1 3/8"	HMY.1-3/8"	HMX.1-3/8"	HMW.1-3/8"	HMV.1-3/8"
Ø 1 7/16"	HMY.1-7/16"	HMX.1-7/16"	HMW.1-7/16"	HMV.1-7/16"
Ø 1 1/2"	HMY.1-1/2"	HMX.1-1/2"	HMW.1-1/2"	HMV.1-1/2"
Ø 1 9/16"	HMY.1-9/16"	HMX.1-9/16"	HMW.1-9/16"	HMV.1-9/16"
Ø 1 5/8"	HMY.1-5/8"	HMX.1-5/8"	HMW.1-5/8"	HMV.1-5/8"
Ø 1 11/16"	HMY.1-11/16"	HMX.1-11/16"	HMW.1-11/16"	HMV.1-11/16"
Ø 1 3/4"	HMY.1-3/4"	HMX.1-3/4"	HMW.1-3/4"	HMV.1-3/4"
Ø 1 13/16"	HMY.1-13/16"	HMX.1-13/16"	HMW.1-13/16"	HMV.1-13/16"
Ø 1 7/8"	HMY.1-7/8"	HMX.1-7/8"	HMW.1-7/8"	HMV.1-7/8"
Ø 1 15/16"	HMY.1-15/16"	HMX.1-15/16"	HMW.1-15/16"	HMV.1-15/16"

			DoC 6" Weldon	DoC 8" Weldon	
DIA	Ø 7/16" - 3"	Ø 7/16" - 8"	Ø 7/8" - 8"	Ø 7/8" - 8"	
	Code	Code	Code	Code	
Ø 2"	HMY.2"	HMX.2"	HMW.2"	HMV.2"	
Ø 2 1/16"	HMY.2-1/16"	HMX.2-1/16"	HMW.2-1/16"	HMV.2-1/16"	
Ø 2 1/8"	HMY.2-1/8"	HMX.2-1/8"	HMW.2-1/8" HMV.2-1/8"		
Ø 2 3/16"	HMY.2-3/16"	HMX.2-3/16"	HMW.2-3/16"	HMV.2-3/16"	
Ø 2 1/4"	HMY.2-1/4"	HMX.2-1/4"	HMW.2-1/4"	HMV.2-1/4"	
Ø 2 5/16"	HMY. 2-5/16"	HMX. 2-5/16"	HMW. 2-5/16"	HMV.2-5/16"	
Ø 2 3/8"	HMY.2-3/8"	HMX.2-3/8"	HMW.2-3/8"	HMV.2-3/8"	
Ø 2 7/16"	HMY.2-7/16"	HMX.2-7/16"	HMW.2-7/16"	HMV.2-7/16"	
Ø 2 1/2"	HMY.2-1/2"	HMX.2-1/2"	HMW.2-1/2"	HMV.2-1/2"	
Ø 2 9/16"	HMY.2-9/16"	HMX.2-9/16"	HMW.2-9/16"	HMV.2-9/16"	
Ø 2 5/8"	HMY.2-5/8"	HMX.2-5/8"	HMW.2-5/8"	HMV.2-5/8"	
Ø 2 11/16"	HMY.2-11/16"	HMX.2-11/16"	HMW.2-11/16"	HMV.2-11/16"	
Ø 2 3/4"	HMY.2-3/4"	HMX.2-3/4"	HMW.2-3/4"	HMV.2-3/4"	
Ø 2 13/16"	HMY.2-13/16"	HMX.2-13/16"	HMW.2-13/16"	HMV.2-13/16"	
Ø 2 7/8"	HMY.2-7/8"	HMX.2-7/8"	HMW.2-7/8"	HMV.2-7/8"	
Ø 2 15/16"	HMY.2-15/16"	HMX.2-15/16"	HMW.2-15/16"	HMV.2-15/16"	
Ø 3"	HMY.3"	HMX.3"	HMW.3"	HMV.3"	
Ø 3 1/16"		HMX.3-1/16"	HMW.3-1/16"	HMV.3-1/16"	
Ø 3 1/8"		HMX.3-1/8"	HMW.3-1/8"	HMV.3-1/8"	
Ø 3 3/16"		HMX.3-3/16"	HMW.3-3/16"	HMV.3-3/16"	
Ø 3 1/4"		HMX.3-1/4"	HMW.3-1/4"	HMV.3-1/4"	
Ø 3 5/16"		HMX.3-5/16"	HMW.3-5/16"	HMV.3-5/16"	
Ø 3 3/8"		HMX.3-3/16	HMW.3-3/8"	HMV.3-3/8"	
Ø 3 7/16"			HMW.3-7/16"		
		HMX.3-7/16"		HMV.3-7/16"	
Ø 3 1/2"		HMX.3-1/2"	HMW.3-1/2"	HMV.3-1/2"	
Ø 3 9/16"		HMX.3-9/16"	HMW.3-9/16"	HMV.3-9/16"	
Ø 3 5/8"		HMX.3-5/8"	HMW.3-5/8"	HMV.3-5/8"	
Ø 3 11/16"		HMX.3-11/16"	HMW.3-11/16"	HMV.3-11/16"	
Ø 3 3/4"		HMX.3-3/4"	HMW.3-3/4"	HMV.3-3/4"	
Ø 3 13/16"		HMX.3-13/16"	HMW.3-13/16"	HMV.3-13/16"	
Ø 3 7/8"		HMX.3-7/8"	HMW.3-7/8"	HMV.3-7/8"	
Ø 3 15/16"		HMX.3-15/16"	HMW.3-15/16"	HMV.3-15/16"	
Ø 4"		HMX.4"	HMW.4"	HMV.4"	
Ø 4 1/16"		HMX.4-1/16"	HMW.4-1/16"	HMV.4-1/16"	
Ø 4 1/8"		HMX.4-1/8"	HMW.4-1/8"	HMV.4-1/8"	
Ø 4 3/16"		HMX.4-3/16"	HMW.4-3/16"	HMV.4-3/16"	
Ø 4 1/4"		HMX.4-1/4"	HMW.4-1/4"	HMV.4-1/4"	
Ø 4 5/16"		HMX.4-5/16"	HMW.4-5/16"	HMV.4-5/16"	
Ø 4 3/8"		HMX.4-3/8"	HMW.4-3/8"	HMV.4-3/8"	
Ø 4 7/16"		HMX.4-7/16"	HMW.4-7/16"	HMV.4-7/16"	
Ø 4 1/2"		HMX.4-1/2"	HMW.4-1/2"	HMV.4-1/2"	
Ø 4 9/16"		HMX.4-9/16"	HMW.4-9/16"	HMV.4-9/16"	
Ø 4 5/8"		HMX.4-5/8"	HMW.4-5/8"	HMV.4-5/8"	
Ø 4 11/16"		HMX.4-11/16"	HMW.4-11/16"	HMV.4-11/16"	
Ø 4 3/4"		HMX.4-3/4"	HMW.4-3/4"	HMV.4-3/4"	
Ø 4 13/16"		HMX.4-13/16"	HMW.4-13/16"	HMV.4-13/16"	
Ø 4 7/8"		HMX.4-7/8"	HMW.4-7/8"	HMV.4-7/8"	
Ø 4 15/16"		HMX.4-15/16"	HMW.4-15/16"	HMV.4-15/16"	
Ø 5"		HMX.5"	HMW.5"	HMV.5"	
Ø 5 1/16"		HMX.5-1/16"	HMW.5-1/16"	HMV.5-1/16"	
		HMX.5-1/8"	HMW.5-1/8"	HMV.5-1/8"	



Weldon shank



Shank sizes

DIA Ø 7/16" - 2 3/8": 3/4"





DoC Depth of Cut measured inside cutter

### TCT

Weldon shank



**Shank sizes**DIA Ø 7/16" - 2 3/8":
3/4"



DoC Depth of Cut measured inside cutter

	DoC 3" Weldon	DoC 4" Weldon	DoC 6" Weldon	DoC 8" Weldon
DIA	Ø 7/16" - 3"	Ø 7/16" - 8"	Ø 7/8" - 8"	Ø 7/8" - 8"
	Code	Code	Code	Code
Ø 5 3/16"		HMX.5-3/16"	HMW.5-3/16"	HMV.5-3/16"
Ø 5 1/4"		HMX.5-1/4"	HMW.5-1/4"	HMV.5-1/4"
Ø 5 5/16"		HMX.5-5/16"	HMW.5-5/16"	HMV.5-5/16"
Ø 5 3/8"		HMX.5-3/8"	HMW.5-3/8"	HMV.5-3/8"
Ø 5 7/16"		HMX.5-7/16"	HMW.5-7/16"	HMV.5-7/16"
Ø 5 1/2"		HMX.5-1/2"	HMW.5-1/2"	HMV.5-1/2"
Ø 5 9/16"		HMX.5-9/16"	HMW.5-9/16"	HMV.5-9/16"
Ø 5 5/8"		HMX.5-5/8"	HMW.5-5/8"	HMV.5-5/8"
Ø 5 11/16"		HMX.5-11/16"	HMW.5-11/16"	HMV.5-11/16"
Ø 5 3/4"		HMX.5-3/4"	HMW.5-3/4"	HMV.5-3/4"
Ø 5 13/16"		HMX.5-13/16"	HMW.5-13/16"	HMV.5-13/16"
Ø 5 7/8"		HMX.5-7/8"	HMW.5-7/8"	HMV.5-7/8"
Ø 5 15/16"		HMX.5-15/16"	HMW.5-15/16"	HMV.5-15/16"
Ø 6"		HMX.6"	HMW.6"	HMV.6"
Ø 6 1/16"		HMX.6-1/16"	HMW.6-1/16"	HMV.6-1/16"
Ø 6 1/8"		HMX.6-1/8"	HMW.6-1/8"	HMV.6-1/8"
Ø 6 3/16"		HMX.6-3/16"	HMW.6-3/16"	HMV.6-3/16"
Ø 6 1/4"		HMX.6-1/4"	HMW.6-1/4"	HMV.6-1/4"
Ø 6 5/16"		HMX.6-5/16"	HMW.6-5/16"	HMV.6-5/16"
Ø 6 3/8"		HMX.6-3/8"	HMW.6-3/8"	HMV.6-3/8"
Ø 6 7/16"		HMX.6-7/16"	HMW.6-7/16"	HMV.6-7/16"
Ø 6 1/2"		HMX.6-1/2"	HMW.6-1/2"	HMV.6-1/2"
Ø 6 9/16"		HMX.6-9/16"	HMW.6-9/16"	HMV.6-9/16"
Ø 6 5/8"		HMX.6-5/8"	HMW.6-5/8"	HMV.6-5/8"
Ø 6 11/16"		HMX.6-11/16"	HMW.6-11/16"	HMV.6-11/16"
Ø 6 3/4"		HMX.6-3/4"	HMW.6-3/4"	HMV.6-3/4"
Ø 6 13/16"		HMX.6-13/16"	HMW.6-13/16"	HMV.6-13/16"
Ø 6 7/8"		HMX.6-7/8"	HMW.6-7/8"	HMV.6-7/8"
Ø 6 15/16"		HMX.6-15/16"	HMW.6-15/16"	HMV.6-15/16"
Ø 7"		HMX.7"	HMW.7"	HMV.7"
Ø 7 1/16"		HMX.7-1/16"	HMW.7-1/16"	HMV.7-1/16"
Ø 7 1/8"		HMX.7-1/8"	HMW.7-1/8"	HMV.7-1/8"
Ø 7 3/16"		HMX.7-3/16"	HMW.7-3/16"	HMV.7-3/16"
Ø 7 1/4"		HMX.7-1/4"	HMW.7-1/4"	HMV.7-1/4"
Ø 7 5/16"		HMX.7-5/16"	HMW.7-5/16"	HMV.7-5/16"
Ø 7 3/8"		HMX.7-3/8"	HMW.7-3/8"	HMV.7-3/8"
Ø 7 7/16"		HMX.7-7/16"	HMW.7-7/16"	HMV.7-7/16"
Ø 7 1/2"		HMX.7-1/2"	HMW.7-1/2"	HMV.7-1/2"
Ø 7 9/16"		HMX.7-9/16"	HMW.7-9/16"	HMV.7-9/16"
Ø 7 5/8"		HMX.7-5/8"	HMW.7-5/8"	HMV.7-5/8"
Ø 7 11/16"		HMX.7-11/16"	HMW.7-11/16"	HMV.7-11/16"
Ø 7 3/4"		HMX.7-3/4"	HMW.7-3/4"	HMV.7-3/4"
Ø 7 13/16"		HMX.7-13/16"	HMW.7-13/16"	HMV.7-13/16"
Ø 7 7/8"		HMX.7-7/8"	HMW.7-7/8"	HMV.7-7/8"
Ø 7 15/16"		HMX.7-15/16"	HMW.7-15/16"	HMV.7-15/16"
Ø 8"		HMX.8"	HMW.8"	HMV.8"

### 6 piece cutter sets



### Set TCT

### metric

### DoC 35 mm

- 6 piece annular cutter set
- Cutter sizes Ø 12, 14, 16, 18, 20, 22 mm
  Pilot pins IBC.75 & IBC.85 included

### Set TCT imperial

### DoC 55 mm

- 6 piece annular cutter set
- Cutter sizes Ø 12, 14, 16, 18, 20, 22 mm
- Pilot pins IBC.80 & IBC.90 included

#### TCT.KIT/L

### 10 piece cutter sets



### DoC 35 mm

- 10 piece annular cutter set
- Cutter sizes 3 x Ø 14, 3 x Ø 18, 2 x Ø 22, 2 x Ø 26 mm
- Pilot pins IBC.75 & IBC.85 included

### TCT.KIT/10S-M1

### DoC 1"

- 10 piece annular cutter set
- Cutter sizes 2 x Ø 9/16", 2 x Ø 11/16", 2 x Ø 13/16", 2 x Ø 7/8", Ø 15/16", Ø 1"
- Pilot pins IBC.75 & IBC.85 included

### TCT.KIT/10S-I1

### DoC 1"

- 10 piece annular cutter set
- Cutter sizes 3 x Ø 9/16", 3 x Ø 13/16", 3 x Ø 7/8", Ø 15/16"
- Pilot pins IBC.75 & IBC.85 included

#### TCT.KIT/10S-I2



### DoC 55 mm

- 10 piece annular cutter set
- Cutter sizes 3 x Ø 14, 3 x Ø 18, 2 x Ø 22, 2 x Ø 26 mm
- Pilot pins IBC.80 & IBC.90 included

### TCT.KIT/10L-M1

### DoC 2"

- 10 piece annular cutter set
- Cutter sizes 2 x Ø 9/16", 2 x Ø 11/16",  $2\times \varnothing$  13/16",  $2\times \varnothing$  7/8",  $\varnothing$  15/16",  $\varnothing$  1"
- Pilot pins IBC.80 & IBC.90 included

### TCT.KIT/10L-I1

### DoC 2"

- 10 piece annular cutter set
- Cutter sizes 3 x Ø 9/16", 3 x Ø 13/16", 3 x Ø 7/8", Ø 15/16"
- Pilot pins IBC.80 & IBC.90 included

### TCT.KIT/10L-I2

### Hole Saw

## Tungsten Carbide Tipped Hole Saw

Euroboor TCT Rail cutters are specifically designed to pierce through the toughest rail grades with the greatest of ease. The super micro-grain (SANDVIK) tungsten carbide tips contain optimised cutting angles and ensure vigorous and smooth cutting performance. The cutter body is specially engineered to provide

maximum stability and support to cope with the extremely hightorques generated in the cutting process. The design of the specific flutes has been based on keeping a horizontal drilling position and the type of chips from high-tensile strength steel in mind, resulting in optimal chip removal.

TCT Rail	material a	pplication	<ul><li>Optimal</li></ul>	O Good	O Possib	ole							
Plastics GRP/CRP	Brass, Copper, Tin	Grey cast iron	Steel					Stainless	steel	Aluminiu	m	Exotic materials, Inconnell, Nimonic, HARDOX,	Rails
			< 500N	< 750N	< 900N	< 1,100N	< 1,400N	< 900N	≤ 900N	< 10% Si	≤ 10% Si		
	0	•	•	•	•	•	•	•	•	•	•	•	•

DoC 35 mm \*

Weldon



### Shank sizes

DIA Ø 12 - 36 mm: 19.05 mm (3/4")



DIA	<b>DIA</b> Ø 17 - 36 mm		
	Code	Code	
Ø 17	TRCS.170S	TRCS.170	
Ø 18	TRCS.180S	TRCS.180	
Ø 19	TRCS.190S	TRCS.190	
Ø 20	TRCS.200S	TRCS.200	
Ø 21	TRCS.210S	TRCS.210	
Ø 22	TRCS.220S	TRCS.220	
Ø 23	TRCS.230S	TRCS.230	
Ø 24	TRCS.240S	TRCS.240	
Ø 25	TRCS.250S	TRCS.250	
Ø 26	TRCS.260S	TRCS.260	
Ø 27	TRCS.270S	TRCS.270	
Ø 28	TRCS.280S	TRCS.280	
Ø 29	TRCS.290S	TRCS.290	
Ø 30	TRCS.300S TRCS.300		
Ø 31	TRCS.310S TRCS.310		
Ø 32	TRCS.320S TRCS.320		
Ø 33	TRCS.330S	TRCS.330	
Ø 34	TRCS.340S TRCS.340		

TRCS.350S

TRCS.360S

Ø 35

Ø 36

DoC 25 mm

Weldon

\*availability on request

TRCS.350

TRCS.360

## ERM.100/3 Resharpening machine



Watch our machines in action on: www.youtube.com/euroboorby

Technical data	
Dimensions (I x w x h)	480 x 270 x 300 mm
Weight	28 kg
Motor power	250 W
Noise emission	< 70 dBa
Grinding disk	Ø 125 mm
Wheel bore	Ø 25 mm
Shaft bore	19.05 mm Weldon
Speed (no load)	2,800 rpm
V. b	110 <b>-</b> 120 V / 60 Hz
Voltage	220 <b>-</b> 240 V / 50 <b>-</b> 60 Hz
	220 - 240 V / 30 = 00 H.

### **Benefits**

- Resharpens HSS cutters from Ø 12 44 mm in cutting depths of 25 - 55 mm
- Easy angle adjustment; simple alignment to original geometry
- Laser guided cutter alignment ensures correct positioning of cutting edge to the
- Motor positioning
- Including CBN\* grinding wheel



### Accessory ERM.100/3

### Standard supply

CBN\* Grinding wheel (Resharping) For HSS

ERM3.0001

Index plate T6 & T7

ERM3.0008

Index plate T4/T8 & T5/T10

ERM3.0009

Index plate T9





Motor adjustment



the cutter sharpening

blade

Laser guidance







Pilot pins are essential for the use of annular cutters, as they provide the following practical uses:

- Centration of cutter
- Control of oil flow
- Slug ejection

As plain as a pilot pin may look, all of these uses require high-precision and extremely low tolerances - just to make

sure the centre is exactly the centre, oil flow starts and stops when you need it to, and the slug does not get stuck inside the cutter.

We offer a wide range of pilot pins that match the lengths, diameters and characteristics of our various annular cutters with exactly the required precision to enhance your drilling job in the best way possible.

#### <sup>1</sup>Extended pilot pin

Specifically for use with long cutters and drilling in very thick workpieces. Makes it possible to continue drilling without midprocess replacement. Suitable for use with longer cutters as from 75 mm (3").

### ²two-piece pilot pin





Place pilot pin through the shank, and attach extension through the bottom inside of the cutter.

#### Overview

Code	Length pin	Diameter pin
IBC.70	77 mm (3")	6.35 mm (1/4")
IBC.70/2	77 mm (3")	6.35 mm (1/4")
IBC.75	90 mm (3 9/16")	6.35 mm (1/4")
IBC.80	103 mm (4 1/16")	8 mm (5/16")
IBC.85	90 mm (3 9/16")	8 mm (5/16")
IBC.90	102 mm (4")	6.35 mm (1/4")
IBC.100	122 mm (4 13/16")	8 mm (5/16")
IBC.110	159 mm (6 1/4")	6.35 mm (1/4")
IBC.120	120 mm (4 3/4")	6.35 mm (1/4")
IBC.130	165 mm (6 1/2")	8 mm (5/16")
IBC.140	150 mm (5 15/16")	8 mm (5/16")
IBC.150	252 mm (9 15/16")	8 mm (5/16")
IBC.160	201 mm (7 15/16")	8 mm (5/16")

Code	Length pin	Diameter pin
IBC.K25 <sup>1</sup>	127 mm (5")	6.35 mm (1/4")
IBC.K50 <sup>1</sup>	155 mm (6 1/8")	6.35 mm (1/4")
IBC.K75 <sup>1</sup>	177 mm (7")	6.35 mm (1/4")
IBC.K100 <sup>1</sup>	204 mm (8")	6.35 mm (1/4")
IBC.K110 <sup>1</sup>	159 mm (6 1/4")	6.35 mm (1/4")
IBC.2P-130 <sup>2</sup>	130 mm (5 1/8")	8 mm (5/16")
IBC.2P-144 <sup>2</sup>	145 mm (5 11/16")	8 mm (5/16")
IBC.157 <sup>2</sup>	159 mm (6 1/4")	8 mm (5/16")
IBC.2P-168 <sup>2</sup>	170 mm (6 11/16")	8 mm (5/16")
IBC.2P-205 <sup>2</sup>	206 mm (8 1/16")	8 mm (5/16")
IBC.2P-256 <sup>2</sup>	258 mm (10 3/16")	8 mm (5/16")





Start drilling. Stop at approx. 50 mm depth.





Remove the extension.

Commence drilling until slug ejection.

### For our IBC.70 and IBC.90 pilot pins we also offer sets:

3 x IBC.70

3 x IBC.90

IBC.70-SET

IBC.90-SET

### Pilot pin features

#### **Precise positioning**

 Whilst having a perfect fit the Euroboor pilot pin is your guidance to centre the cutter.



### Oil flow regulation

- In standstill position with the cutter above the workpiece, the pilot pin prevents the oil from flowing.
- When moving down the cutter with the pilot pin onto the workpiece to commence drilling, the pilot pin is pushed up into the arbor and permits the oil to flow into the cutter for direct cooling and lubricating.



### Slug ejection

- When the cutter is through the material, the pilot pin pushes the slug out of the workpiece by means of the strong spring inside the arbor.
- · Consequently the oil flow is automatically cut off.



# Pilot pin recommendations



### HSS metric - 30 mm

HCS (DoC 30 mm)	
Ø 12 - 60 mm	Ø 61 - 100 mm
<b>IBC.70</b> (6.35 x 77 mm)	<b>IBC.80</b> (8.00 x 103 mm)
HCSU (DoC 30 mm)	
Ø 12 - 60 mm	
<b>IBC.70</b> (6.35 x 77 mm)	

### HSS metric - 55 mm

HCL (DoC 55 mm)	
Ø 12 - 60 mm	Ø 61 - 100 mm
IBC.90 (6.35 x 102 mm)	<b>IBC.100</b> (8.00 x 122 mm)
	IBC.2P-130 (8.00 x 130 mm)
HCLU (DoC 55 mm)	
Ø 12 - 60 mm	
<b>IBC.90</b> (6.35 x 102 mm)	

### HSS metric - 75 & 100 mm

HCY (DoC 75 mm)	HCX (DoC 100 mm)
Ø 14 - 50 mm	Ø 18 - 50 mm
IBC.K25 (6.35 x 127 mm)	IBC.K50 (6.35 x 155 mm)

### HSS imperial - 1"

HCS (DoC 1")	
Ø 7/16" - 2 5/16"	Ø 2 3/8" - 4"
<b>IBC.70</b> (6.35 x 77 mm)	<b>IBC.80</b> (8.00 x 103 mm)

### HSS imperial - 2"

HCL (DoC 2")	
Ø 7/16" - 2 5/16"	Ø 2 3/8" - 4"
IBC.90 (6.35 x 102 mm)	IBC.100 (8.00 x 122 mm)
	<b>IBC.2P-130</b> (8.00 x 130 mm)
HCLU (DoC 2")	
Ø 7/16" - 2 5/16"	
IBC.90 (6.35 x 102 mm)	

### HSS Stack metric - 55 & 75 mm

HCPL (DoC 55 mm)	HCPY (DoC 75 mm)
Ø 18 - 32 mm	Ø 18 - 32 mm
IBC.90 (6.35 x 102 mm)	IBC.K25 (6.35 x 127 mm)

### HSS Stack imperial - 2" & 3"

HCPL (DoC 2")	HCPY (DoC 3")
Ø 11/16" - 1 1/4"	Ø 11/16" - 1 1/4"
IBC.90 (6.35 x 102 mm)	IBC.K25 (6.35 x 127 mm)

### HSS-Cobalt (M42) metric - 30 mm

IBS (DoC 30mm)	
Ø 12 - 60 mm	
IBC.70 (6.35 x 77 mm)	

### HSS-Cobalt (M42) metric - 55 mm

IBL (DoC 55 mm)	
Ø 12 - 60 mm	
<b>IBC.90</b> (6.35 x 102 mm)	

### HSS-Cobalt (M35) imperial - 1"

IBS (DoC 1")		
Ø 7/16" - 2 5/16"		
IBC.70 (6.35 x 77 mm)		

### HSS-Cobalt (M35) imperial - 2"

IBL (DoC 2")	
Ø 7/16" - 2 5/16"	
IBC.90 (6.35 x 102 mm)	

### HSS-Cobalt (M35) imperial - 3"

IBY (DoC 3")		
Ø 7/16" - 2 5/16"		
IBC.K25 (6.35 x 127 mm)		



### TCT metric - 35 mm

HMS (DoC 35 mm)	
Ø 12 - 17 mm	Ø 18 - 100 mm
<b>IBC.75</b> (6.35 x 90 mm)	<b>IBC.80</b> (8.00 x 103 mm)
HMSU (DoC 35 mm)	
Ø 12 - 17 mm	Ø 18 - 60 mm
IBC.75 (6.35 x 90 mm)	<b>IBC.80</b> (8.00 x 103 mm)

### TCT metric - 55 mm

HML (DoC 55 mm)	
Ø 12 - 17 mm	Ø 61 - 200 mm
IBC.90 (6.35 x 102 mm)	IBC.100 (8.00 x 122 mm)
Ø 18 - 60 mm	<b>IBC.2P-144</b> (8.00 x 145 mm)
IBC.80 (8.00 x 103 mm)	
HMLU (DoC 55 mm)	
Ø 12 - 17 mm	Ø 18 - 60 mm
<b>IBC.90</b> (6.35 x 102 mm)	<b>IBC.80</b> (8.00 x 103 mm)

### TCT metric - 75 & 100 mm

HMY (DoC 75 mm)	HMX (DoC 100 mm)
Ø 12 - 17 mm	Ø 12 - 17 mm
IBC.K25 (6.35 x 127 mm)	<b>IBC.110</b> (6.35 x 159 mm)
Ø 18 - 50 mm	Ø 18 - 200 mm
IBC.140 (8.00 x 150 mm)	<b>IBC.130</b> (8.00 x 165 mm)
IBC.157 (8.00 x 159 mm)	<b>IBC.2P-168</b> (8.00 x 170 mm)

### TCT metric - 150 & 200 mm

HMW (DoC 150 mm)	HMV (DoC 200 mm)
Ø 22 - 200 mm	Ø 22 - 200 mm
IBC.160 (8.00 x 201 mm)	<b>IBC.150</b> (8.00 x 252 mm)
IBC.2P-205 (8.00 x 206 mm)	<b>IBC.2P-256</b> (8.00 x 258 mm)

### TCT imperial - 1"

HMS (DoC 1")	
Ø 7/16" - 11/16"	3/4" - 4"
<b>IBC.75</b> (6.35 x 90 mm)	<b>IBC.80</b> (8.00 x 103 mm)
HMSU (DoC 1")	
Ø 7/16" - 11/16"	Ø 3/4" - 2 5/16"
<b>IBC.75</b> (6.35 x 90 mm)	IBC.80 (8.00 x 103 mm)

### TCT imperial - 2"

HML (DoC 2")	
Ø 7/16" - 11/16"	Ø 2 3/8" - 8"
IBC.90 (6.35 x 102 mm)	<b>IBC.100</b> (8.00 x 122 mm)
3/4" - 2 5/16"	<b>IBC.2P-144</b> (8.00 x 145 mm)
<b>IBC.80</b> (8.00 x 103 mm)	
HMLU (DoC 2")	
7/16" - 11/16"	
IBC.90 (6.35 x 102 mm)	
3/4" - 2 15/16"	
IBC.80 (8.00 x 103 mm)	

### TCT imperial - 3" & 4"

HMY (DoC 3")	HMX (DoC 4")
Ø 7/16" - 11/16"	Ø 7/16" - 11/16"
IBC.K25 (6.35 x 127 mm)	IBC.110 (6.35 x 159 mm)
Ø 3/4"- 3"	Ø 3/4" - 8"
<b>IBC.140</b> (8.00 x 150 mm)	<b>IBC.130</b> (8.00 x 165 mm)
IBC.157 (8.00 x 159 mm)	IBC.2P-168 (8.00 x 170 mm)

### TCT imperial - 6" & 8"

HMW (DoC 6")	HMV (DoC 8")
Ø 7/8" - 8"	Ø 7/8" - 8"
IBC.160 (8.00 x 201 mm)	IBC.150 (8.00 x 252 mm)
IBC.2P-205 (8.00 x 206 mm)	IBC.2P-256 (8.00 x 258 mm)

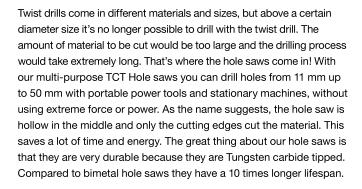
### TCT Rail metric - 25 & 35 mm

TRCS (DoC 25 mm)	TRCS (DoC 35 mm)
Ø 17 - 36 mm	Ø 17 - 36 mm
IBC.70 (6.35 x 77 mm)	<b>IBC.75</b> (6.35 x 90 mm)



### Hole Saw

## Tungsten Carbide Tipped Hole Saw



The hole saws are equipped with a pilot drill and ejector spring. The pilot drill allows simple centering and clean guidance in the material. With the ejector spring, the cut material is easily ejected from the hole saw. The safety stopper protects the workpiece (also a hex key is included for fixing the pilot drill).

- Material thickness for hand drills: max. 6 mm (1/4")
- Recommended hole diameter for hand drills: max 25 mm (1")
- Material thickness for portable magnetic drilling machines: max. 20 mm (13/16")
- Parallel shank with 3 flats Fits all common drill chucks

Diameter	Code
11	THS.110
12	THS.120
13	THS.130
14	THS.140
15	THS.150
16	THS.160
17	THS.170
18	THS.180
19	THS.190
20	THS.200
21	THS.210
22	THS.220
23	THS.230
24	THS.240
25	THS.250
26	THS.260
27	THS.270
28	THS.280
29	THS.290
30	THS.300
31	THS.310
32	THS.320

Diameter	Code
33	THS.330
34	THS.340
35	THS.350
36	THS.360
37	THS.370
38	THS.380
39	THS.390
40	THS.400
41	THS.410
42	THS.420
43	THS.430
44	THS.440
45	THS.450
46	THS.460
47	THS.470
48	THS.480
49	THS.490
50	THS.500
7/16"	THS.7/16"
1/2"	THS.1/2"
9/16"	THS.9/16"
5/8"	THS.5/8"

Diameter	Ouc
11/16"	THS.11/16"
3/4"	THS.3/4"
13/16"	THS.13/16"
7/8"	THS.7/8"
15/16"	THS.15/16"
1"	THS.1"
1-1/16"	THS.1-1/16"
1-1/8"	THS.1-1/8"
1-3/16"	THS.1-3/16"
1-1/4"	THS.1-1/4"
1-5/16"	THS.1-5/16"
1-3/8"	THS.1-3/8"
1-7/16"	THS.1-7/16"
1-1/2"	THS.1-1/2"
1-9/16"	THS.1-9/16"
1-5/8"	THS.1-5/8"
1-11/16"	THS.1-11/16"
1-3/4"	THS.1-3/4"
1-13/16"	THS.1-13/16"
1-7/8"	THS.1-7/8"
1-15/16"	THS.1-15/16"
2"	THS.2"

Diameter | Code



**TCT Hole Saw** 

- Shank: Ø 10 mm (3/8")
- Max. depth of cut: 27 mm (1 1/16")
- Wall thickness: 3 mm (1/8")

Drilling with bench drill / magnetic drilling machine Max. material thickness for drilling in:

- Steel with bench drill: approximately 20 mm (13/16")
- Stainless steel with bench drill: approximately 10 mm (3/8")
- Aluminium with bench drill: approximately 20 mm (13/16")

#### Drilling with hand drill

Max. material thickness for drilling in:

- Steel with hand drill: approximately 2 mm (1/16")
- Stainless steel with hand drill: approximately 2 mm (1/16")
- Aluminium with hand drill: approximately 2 mm (1/16")

### Weldon twist drills

HSS 19.05 mm (3/4") Weldon shank. 135° split point. Available in 30 mm, 50 mm length, 1" and 2" (DoC). **Machined from one solid blank** (no weak spots caused by inferior material or welds).

DoC 30 mm DIA Ø 6 - 14 mm

Ø6

Ø7

Ø8

Ø9

Ø 10

Ø 11

Ø 12

Ø 13

Ø 14

Code

SSPI.06

SSPI.07

SSPI.08

SSPI.09

SSPI.10

SSPI.11

SSPI.12

SSPL13

SSPI.14

DoC 1" DIA Ø 1/4" - 9/16"

INCH	Code
Ø 1/4"	SSPI.1/4"
Ø 5/16"	SSPI.5/16"
Ø 3/8"	SSPI.3/8"
Ø 7/16"	SSPI.7/16"
Ø 1/2"	SSPI.1/2"
Ø 9/16"	SSPI.9/16"



DoC 50 mm DIA Ø 6 - 14 mm DoC 2" DIA Ø 1/4" - 9/16"

ММ	Code
Ø6	SPI.06
Ø7	SPI.07
Ø 8	SPI.08
Ø9	SPI.09
Ø 10	SPI.10
Ø 11	SPI.11
Ø 12	SPI.12
Ø 13	SPI.13
Ø 14	SPI.14









### 6 piece Weldon twist drill set

- HSS 19.05 mm (3/4") Weldon shank
- 135° split point
- 30 mm length (DoC)
- Sizes Ø 6 11 mm, 1 mm increments

#### SSPLKIT

### 6 piece Weldon twist drill set

- HSS 19.05 mm (3/4") Weldon shank
- 135° split point
- 50 mm length (DoC)
- Sizes Ø 6 11 mm, 1 mm increments

#### SPI.KIT

### Countersinks

- HSS 19.05 mm (3/4") Weldon shank
- 3 cutting edges
- 90°





### Straight shank countersinks

ММ	Code
Ø 6.3	CSB.63
Ø 8.3	CSB.83
Ø 10.4	CSB.104
Ø 12.4	CSB.124
Ø 16.5	CSB.165
Ø 20.5	CSB.205
Ø 20.5	CSB.205



- Sizes Ø 6.3 8.3 10.4 12.4 16.5 20.5 mm
- HSS-Cobalt (M35 quality) straight shank
- Compatible with every drill chuck
- 3 cutting edges • 90°
- CBS.620



### Twist drills



- HSS-Cobalt (M35 quality)
- 135° split point
- Compatible with every drill chuck

#### DIA Ø 1 - 13 mm

ММ	Code
Ø 1.0	TDCO.010
Ø 1.5	TDCO.015
Ø 2.0	TDCO.020
Ø 2.5	TDCO.025
Ø 3.0	TDCO.030
Ø 3.3	TDCO.033
Ø 3.5	TDCO.035
Ø 4.0	TDCO.040
Ø 4.2	TDCO.042
Ø 4.5	TDCO.045
Ø 5.0	TDCO.050
Ø 5.5	TDCO.055
Ø 6.0	TDCO.060
Ø 6.5	TDCO.065
Ø 6.8	TDCO.068

ММ	Code
Ø 7.0	TDCO.070
Ø 7.5	TDCO.075
Ø 8.0	TDCO.080
Ø 8.5	TDCO.085
Ø 9.0	TDCO.090
Ø 9.5	TDCO.095
Ø 10.0	TDCO.100
Ø 10.2	TDCO.102
Ø 10.5	TDCO.105
Ø 11.0	TDCO.110
Ø 11.5	TDCO.115
Ø 12.0	TDCO.120
Ø 12.5	TDCO.125
Ø 13.0	TDCO.130

Sizes Ø 1.0 - 7.5 mm come pre-packed in hanger box sets of 10 pcs. Sizes Ø 8.0 - 13.0 mm are pre-packed in hanger box sets of 5 pcs. Also available as 19-piece (TDS.100) and 25-piece (TDS.200) set.



#### 25 piece Drill Bit set

- Sizes Ø 1-13 mm with 0,5 mm increments. 3-flats shank (4 mm and up)
- HSS-G (Fully Ground)
- Fully ground, not roll-forged, for more stability
- **DIN 338**
- 118° split point
- Compatible with every drill chuck
- Drills also sold per 5 or 10 pieces

#### TDH.25



#### 25 piece Drill Bit set

- Sizes Ø 1-13 mm with 0,5 mm increments. 3-flats shank (4mm and up)
- HSS-Co Steel-cobalt alloy (5%)
- Fully ground, not roll-forged, for more stability
- **DIN 338**
- 135° split point
- Compatible with almost every drill chuck
- Drills also sold per 5 or 10 pieces

#### TDC.25



### 25 piece twist drill set

- Sizes Ø 1 13 mm, 0.5 mm increments
- HSS TiN coated
- **DIN 338** 118° point
- Compatible with every drill chuck

#### TDS.190



#### 19 piece twist drill set

- Sizes Ø 1 10 mm, 0.5 mm increments
- HSS-Cobalt (M35) quality)
- 135° split point
- Compatible with every drill chuck
- Drills also sold per 5 and 10 pieces

**DIN 338** 



### 25 piece twist drill set

- Sizes Ø 1 13 mm, 0.5 mm increments
- HSS-Cobalt (M35) quality)
- **DIN 338**
- 135° split point
- Compatible with every drill chuck
- Drills also sold per 5 and 10 pieces

TDS.200

### Step drills

- HSS TiN coated
- Spiral flute for efficient chip removal

### Step drills

ММ	Code
Ø 4 - 12	ESD.412
Ø 4 - 20	ESD.420
Ø 6 - 30	ESD.630

### 3-piece step drill set

- Sizes:
- Ø 4 12 mm
- Ø 4 20 mm Ø 6 - 30 mm
- HSS TiN coated
- Spiral flute for efficient chip removal

ESS.430/2

### After drilling aid

### Magnetic stick for cleaning up metal shavings.

### Ø 22 x 400 mm

Simply wave the magnetic stick over the metal shavings to pick them up, carry them over to your scrap barrel, pull the plunger and the shavings are neatly deposited. The Euroboor magic stick is strong enough to quickly clean up your biggest mess of metal shavings.

- Clean up sharp-edged metal chips, screws and other metal parts easily
- Items are safely ejected off of magic stick without hand contact
- Ideal for hard-to-reach spaces

MAGICSTICK





### Tapping chucks

### Morse Taper torque controlled tapping chucks

Specifically designed for use in combination with portable magnetic drilling machines.

### **Benefits**

- + Quick and precise installation of taps
- + Increased operation accuracy
- Drastically reduced risk of broken taps and destroyed threads

#### **Features**

- Slip clutch torque limiter
- Clear torque controller adjustment scale
- Full instruction manual including:
  - Installation and mounting guide
  - Torque setting guide
  - Tapping speed guide
  - m/min (ft/min) to rpm calculation
  - Cutting fluid recommendation
  - Maintenance guide
- Full "all parts" servicing possibility
- Complete delivery including:
  - 2 different rubber centration collets
  - All tools required for installation and adjustment





### Torque controlled tapping chuck MT3

Machine tap sizes
 M8 up to M20 (DIN 371 and DIN376)

ETC<sub>2</sub>

 Machine tap sizes M14 up to M30 (DIN376)

ETC.3



### Tapping chuck B16 MT2 - 3

- Quick change M5 M12
- Including rubber clamps
- GSW.172121 (Ø 4 7 mm)
- GSW.172122 (Ø 7 10 mm)
- Auto reverse
   GSW.512R

### Tapping chuck B22 MT3 - 4

- Quick change M8 M20
- Including rubber clamps
  - GSW.172202 (Ø 10.38 14 mm)
- GSW.172203 (Ø 16 mm)
- Auto reverse
- GSW.820R

### **Feature overview**

	Morse Taper	Tap capacity	Slip clutch	Automatic reverse
ETC.2	MT3	M8 - M20	•	-
ETC.3	MT3	M14 - M30	•	-
GSW.512R	B16 MT2 / 3	M5 - M12	-	•
GSW.820R	B22 MT3 / 4	M8 - M20	-	•

### Tap holders (Weldon)

All our tap holders are fitted with 3/4" Weldon shank

#### **DIN 376**

#### Ø 6 mm TCM.08D376 M10 Ø 7 mm TCM.10D376 M12 Ø 9 mm TCM.12D376 M14 Ø 11 mm TCM.14D376 M16 Ø 12 mm TCM.16D376 M18 Ø 14 mm TCM.18D376 TCM.20D376 M20 Ø 16 mm M22 - 24 Ø 18 mm TCM.27D376 M27 Ø 20 mm M30 Ø 22 mm

#### **ISO 529**

Tap holder	Shank	Code
M8	Ø 8 mm	TCM.08I529
M10	Ø 10 mm	TCM.10I529
M12	Ø 9 mm	TCM.12I529
M14	Ø 11.2 mm	TCM.14I529
M16	Ø 12.5 mm	TCM.16I529
M18	Ø 14 mm	TCM.18I529
M20	Ø 14 mm	TCM.20I529
M22	Ø 16 mm	TCM.22I529
M24	Ø 18 mm	TCM.24I529
M27 - 30	Ø 20 mm	TCM.27D376

#### ASA

Tap holder	Shank	Code
1/4"	Ø 6.5 mm	TCM.1/4"ASA
5/16"	Ø 8.07 mm	TCM.5/16"ASA
3/8"	Ø 9.68 mm	TCM.3/8"ASA
7/16"	Ø 8.2 mm	TCM.7/16"ASA
1/2"	Ø 9.29 mm	TCM.1/2"ASA
9/16"	Ø 10.9 mm	TCM.9/16"ASA
5/8"	Ø 12.17 mm	TCM.5/8"ASA
11/16"	Ø 13.77 mm	TCM.11/16"ASA
3/4"	Ø 14.9 mm	TCM.3/4"ASA
13/16"	Ø 16.5 mm	TCM.13/16"ASA
15/16"	Ø 19.2 mm	TCM.15/16"ASA
1"	Ø 20.2 mm	TCM.1"ASA
1 1/16"	Ø 22.5 mm	TCM.1-1/16"ASA
1 1/8"	Ø 22.7 mm	TCM.1-1/8"ASA
1 3/16"	Ø 25.7 mm	TCM.1-3/16"ASA

### JIS

Tap holder	Shank	Code
M12	Ø 8.5 mm	TCM.12JIS
M14	Ø 10.5 mm	TCM.14JIS
M16	Ø 12.5 mm	TCM.16I529







### Machine taps

Euroboor machine taps are high-precision tools produced according to DIN standard (DIN 371/376) from Cobalt reinforced High Speed Steel (M35 quality).

### Green ring

- Blank finish
- · For use in materials such as construction steel, aluminium, zinc, lead, copper and brass

- · Black oxide finish for improved durability
- For use in materials such as cast iron and stainless steel



### Through holes

Green ring	Size	Specification	Ø	White ring
910.030C	M3 x 0.5	DIN 371	3.5 mm	910.030V
910.040C	M4 x 0.7	DIN 371	4.5 mm	910.040V
910.050C	M5 x 0.8	DIN 371	6 mm	910.050V
910.060C	M6 x 1.0	DIN 371	6 mm	910.060V
910.080C	M8 x 1.25	DIN 371	8 mm	910.080V
910.100C	M10 x 1.5	DIN 371	10 mm	910.100V
900.100C	M10 x 1.5	DIN 376	7 mm	900.100V
900.120C	M12 x 1.75	DIN 376	9 mm	900.120V
900.140C	M14 x 2.0	DIN 376	11 mm	900.140V
900.160C	M16 x 2.0	DIN 376	12 mm	900.160V
900.180C	M18 x 2.5	DIN 376	14 mm	900.180V
900.200C	M20 x 2.5	DIN 376	16 mm	900.200V
900.220C	M22 x 2.5	DIN 376	18 mm	900.220V
900.240C	M24 x 3.0	DIN 376	18 mm	900.240V
900.270C	M27 x 3.0	DIN 376	20 mm	900.270V
900.300C	M30 x 3.5	DIN 376	22 mm	900.300V



### We offer the following application choices:



#### **Blind holes**

Spiral flute





### **Blind holes**

Green ring	Size	Specification	Ø	White ring
910.031C	M3 x 0.5	DIN 371	3.5 mm	910.031V
910.041C	M4 x 0.7	DIN 371	4.5 mm	910.041V
910.051C	M5 x 0.8	DIN 371	6 mm	910.051V
910.061C	M6 x 1.0	DIN 371	6 mm	910.061V
910.081C	M8 x 1.25	DIN 371	8 mm	910.081V
910.101C	M10 x 1.5	DIN 371	10 mm	910.101V
900.101C	M10 x 1.5	DIN 376	7 mm	900.101V
900.121C	M12 x 1.75	DIN 376	9 mm	900.121V
900.141C	M14 x 2.0	DIN 376	11 mm	900.141V
900.161C	M16 x 2.0	DIN 376	12 mm	900.161V
900.181C	M18 x 2.5	DIN 376	14 mm	900.181V
900.201C	M20 x 2.5	DIN 376	16 mm	900.201V
900.221C	M22 x 2.5	DIN 376	18 mm	900.221V
900.241C	M24 x 3.0	DIN 376	18 mm	900.241V
900.271C	M27 x 3.0	DIN 376	20 mm	900.271V
900.301C	M30 x 3.5	DIN 376	22 mm	900.301V





### Drill tap combination (sets)

### **Features**

- Drilling & tapping with 1 tool
- Also suitable for hard metals (such as stainless steel)

Tap and twist drill set

Ø 2.5 mm

Ø 3.3 mm

Ø 4.2 mm

Ø 5 mm

Ø 6.8 mm

Ø 8.5 mm

Ø 10.2 mm

14 piece twist drill and tap setHSS-Cobalt (M35 quality)DIN 371/376

Through holes: straight flute

and stainless steel

DTS.312

 White ring: black oxide finish for improved durability.

For use in materials such as cast iron

Twist drills (TDCO-series) also sold per 5 and

10 pieces and taps also available separately

- Cost saver:
  - No need for drill chuck adapter
  - No need for drill chuck
  - No need for tap holder
- Time saver:
  - No need finding the correct tool
  - No need to interchange tools
  - No need to reposition drilling machine
- Especially suitable for on-the-job tasks with limitations to the amount of tools you can bring along.
- HSS-Cobalt (M35 quality)
- Black oxide coating







### Application

- Alloy steels, castings & forgings
- Suitable and directly fitting (19.05 mm Weldon connection) to Euroboor magnetic drilling machines: ECO.50-T.

ECO.50+/T,

ECO.55S/T,

ECO.55s+/T,

ECO.55s+/TA,

ECO.100/4 (D),

ECO.100s+/T,

ECO.100s+/TD, TUBE.55S/T

TUBE.55s+/T

Part number	Tap size	Max. drilling/ tapping depth
EDT.08	M8 x 1.25	17 mm
EDT.10	M10 x 1.5	20 mm
EDT.12	M12 x 1.75	20 mm
EDT.14	M14 x 2.0	18 mm
EDT.16	M16 x 2.0	18 mm
EDT.18	M18 x 2.5	20 mm
EDT.20	M20 x 2.5	25 mm
EDT.22	M22 x 2.5	24 mm
EDT.24	M24 x 3.0	26 mm
EDT.27	M27 x 3.0	29 mm
EDT.30	M30 x 3.5	31 mm

### Drill tap combination sets

- Delivered in luxury case
- Content: EDT.08, EDT.10 and EDT.12

### EDT.SET/1

- Delivered in luxury case
- Content: EDT.14, EDT.16 and EDT.18

EDT.SET/2

## Sets

With the developing of our innovative tools, we focus on adding value and making your daily work easier. Our sets are a good example of this. We offer a wide range of sets for annular cutting, twist drilling, tapping and many more.



### 25 piece Drill Bit set

- Sizes Ø 1-13 mm with 0,5 mm increments. 3-flats shank (4 mm and up)
- HSS-G (Fully Ground)
- Fully ground, not roll-forged, for more stability
- **DIN 338**
- 118° split point
- · Compatible with every drill chuck
- Drills also sold per 5 or 10 pieces



### 25 piece Drill Bit set

- Sizes Ø 1-13 mm with 0,5 mm increments. 3-flats shank (4mm and up)
- HSS-Co Steel-cobalt alloy (5%)
- Fully ground, not roll-forged, for more stability
- **DIN 338**
- 135° split point
- Compatible with almost every drill chuck
- Drills also sold per 5 or 10 pieces

### 25 piece twist drill set

- Sizes Ø 1 13 mm, 0.5 mm increments
- HSS TiN coated
- DIN 338
- 118° point
- · Compatible with every drill chuck

TDS.190



### 19 piece twist drill set

- Sizes Ø 1 10 mm, 0.5 mm increments
- HSS-Cobalt (M35 quality)
- **DIN 338**
- 135° split point
- Compatible with every drill chuck
- Drills also sold per 5 and 10 pieces

TDS.100



### 25 piece twist drill set

- Sizes Ø 1 13 mm, 0.5 mm increments
- HSS-Cobalt (M35 quality)
- **DIN 338**
- 135° split point
- Compatible with every drill chuck
- Drills also sold per 5 and 10 pieces

TDS.200



### 6 piece Weldon twist drill set

- HSS 19.05 mm (3/4") Weldon shank
- 135° split point
- 30 mm length (DoC)
- Sizes Ø 6 11 mm, 1 mm increments

SSPI.KIT



### 6 piece Weldon twist drill set

- HSS 19.05 mm (3/4") Weldon shank
- 135° split point
- 50 mm length (DoC)
- Sizes Ø 6 11 mm, 1 mm increments

SPI.KIT



### 3-piece step drill set

- Sizes:
- Ø 4 12 mm
  - Ø 4 20 mm Ø 6 - 30 mm
- HSS TiN coated
- Spiral flute for efficient chip removal

ESS.430/2



### 6 piece straight shank countersink set

- Sizes Ø 6.3 8.3 10.4 12.4 16.5 20.5 mm
- HSS-Cobalt (M35 quality) straight shank
- Compatible with every drill chuck
- 3 cutting edges

CBS.620



### 14 piece twist drill and tap set

- HSS-Cobalt (M35 quality)
- DIN 371/376
- Through holes: straight flute
- White ring: black oxide finish for improved durability. For use in materials such as cast iron and stainless steel
- Twist drills (TDCO-series) also sold per 5 and 10 pieces and taps also available separately

DTS.312



### **Drill tap combination sets**

- Delivered in luxury case
- Content: EDT.08, EDT.10 and EDT.12

EDT.SET/1

- Delivered in luxury case
- Content: EDT.14, EDT.16 and EDT.18

EDT.SET/2